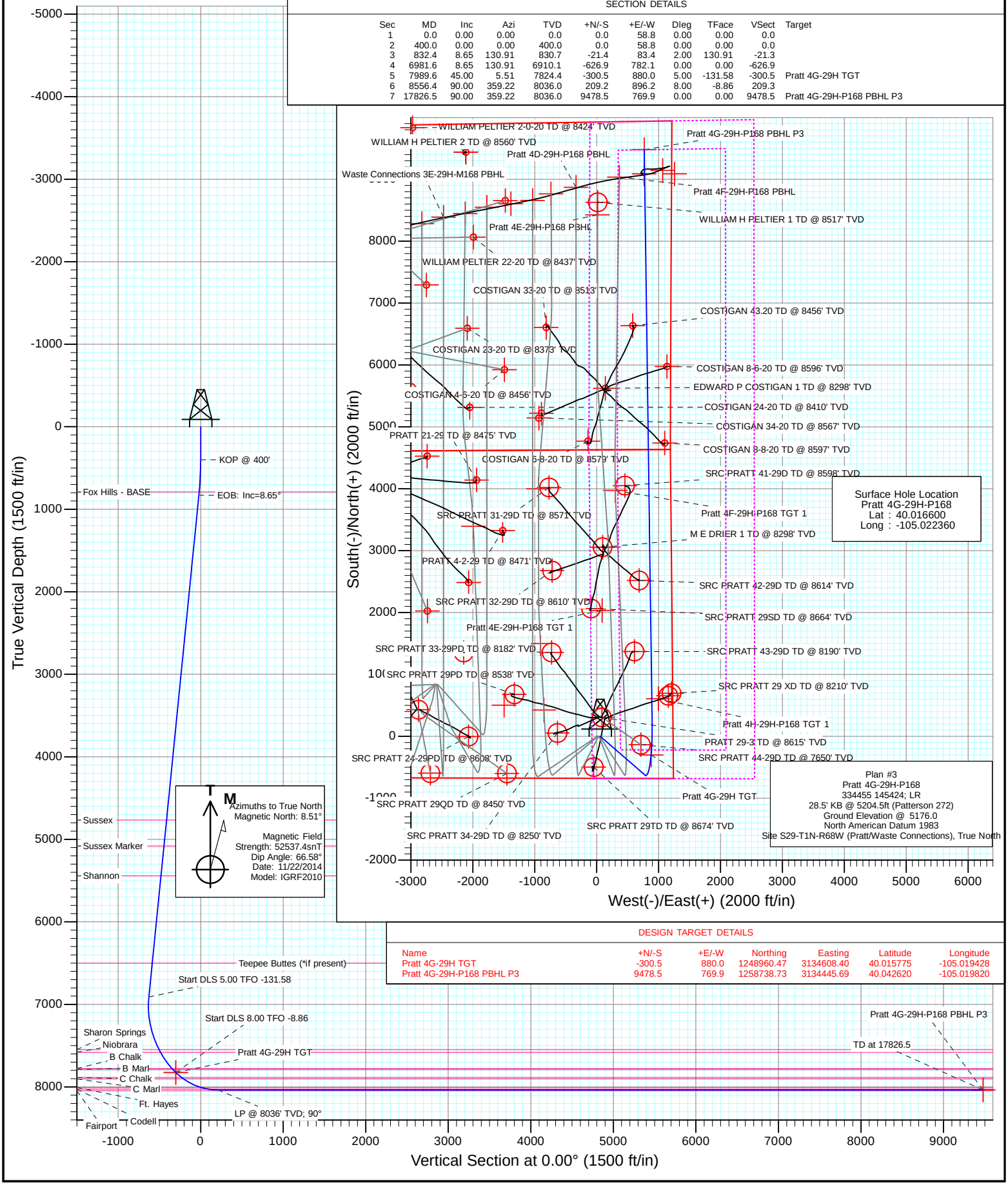
Project: DJ Wattenberg
Site: S29-T1N-R68W (Pratt/Waste Connections)
Well: Pratt 4G-29H-P168
Wellbore: Hz
Design: Plan #3

encana

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	58.8	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	58.8	0.00	0.00	0.0	
3	832.4	8.65	130.91	830.7	-21.4	83.4	2.00	130.91	-21.3	
4	6981.6	8.65	130.91	6910.1	-626.9	782.1	0.00	0.00	-626.9	
5	7989.6	45.00	5.51	7824.4	-300.5	880.0	5.00	-131.58	-300.5	Pratt 4G-29H TGT
6	8556.4	90.00	359.22	8036.0	209.2	896.2	8.00	-8.86	209.3	
7	17826.5	90.00	359.22	8036.0	9478.5	769.9	0.00	0.00	9478.5	Pratt 4G-29H-P168 PBHL P3



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Pratt 4G-29H TGT	-300.5	880.0	1248960.47	3134608.40	40.015775	-105.019428
Pratt 4G-29H-P168 PBHL P3	9478.5	769.9	1258738.73	3134445.69	40.042620	-105.019820

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections)
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Project:	DJ Wattenberg	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4G-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

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 S29-T1N-R68W (Pratt/Waste Connections)

Site Position:		**Northing:**	1,249,256.24 ft	**Latitude:**	40.016600
From:	Lat/Long	**Easting:**	3,133,726.79 ft	**Longitude:**	-105.022570
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.31 °

Well Pratt 4G-29H-P168

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,249,256.52 ft	**Latitude:**	40.016600
	+E/-W	58.8 ft	**Easting:**	3,133,785.61 ft	**Longitude:**	-105.022360
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,176.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/22/2014	8.51	66.58	52,537

Design Plan #3

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	58.8	0.00

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	58.8	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	58.8	0.00	0.00	0.00	0.00	
832.4	8.65	130.91	830.7	-21.4	83.4	2.00	2.00	0.00	130.91	
6,981.6	8.65	130.91	6,910.1	-626.9	782.1	0.00	0.00	0.00	0.00	
7,989.6	45.00	5.51	7,824.4	-300.5	880.0	5.00	3.61	-12.44	-131.58	Pratt 4G-29H TGT
8,556.4	90.00	359.22	8,036.0	209.2	896.2	8.00	7.94	-1.11	-8.86	
17,826.5	90.00	359.22	8,036.0	9,478.5	769.9	0.00	0.00	0.00	0.00	Pratt 4G-29H-P168 P

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections)
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Project:	DJ Wattenberg	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4G-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

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	58.8	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	58.8	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	58.8	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	58.8	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	58.8	0.0	0.00	0.00	KOP @ 400'
500.0	2.00	130.91	500.0	-1.2	60.1	-1.1	2.00	2.00	
600.0	4.00	130.91	599.8	-4.6	64.1	-4.6	2.00	2.00	
700.0	6.00	130.91	699.5	-10.3	70.7	-10.3	2.00	2.00	
790.2	7.80	130.91	789.0	-17.4	78.9	-17.4	2.00	2.00	Fox Hills - BASE
800.0	8.00	130.91	798.7	-18.3	79.9	-18.3	2.00	2.00	
832.4	8.65	130.91	830.7	-21.4	83.4	-21.3	2.00	2.00	EOB: Inc=8.65°
900.0	8.65	130.91	897.6	-28.0	91.1	-28.0	0.00	0.00	
1,000.0	8.65	130.91	996.5	-37.9	102.5	-37.8	0.00	0.00	
1,100.0	8.65	130.91	1,095.3	-47.7	113.8	-47.7	0.00	0.00	
1,200.0	8.65	130.91	1,194.2	-57.6	125.2	-57.5	0.00	0.00	
1,300.0	8.65	130.91	1,293.0	-67.4	136.6	-67.4	0.00	0.00	
1,400.0	8.65	130.91	1,391.9	-77.3	147.9	-77.2	0.00	0.00	
1,500.0	8.65	130.91	1,490.8	-87.1	159.3	-87.1	0.00	0.00	
1,600.0	8.65	130.91	1,589.6	-97.0	170.6	-96.9	0.00	0.00	
1,700.0	8.65	130.91	1,688.5	-106.8	182.0	-106.8	0.00	0.00	
1,800.0	8.65	130.91	1,787.4	-116.7	193.4	-116.6	0.00	0.00	
1,900.0	8.65	130.91	1,886.2	-126.5	204.7	-126.5	0.00	0.00	
2,000.0	8.65	130.91	1,985.1	-136.4	216.1	-136.3	0.00	0.00	
2,100.0	8.65	130.91	2,083.9	-146.2	227.5	-146.2	0.00	0.00	
2,200.0	8.65	130.91	2,182.8	-156.0	238.8	-156.0	0.00	0.00	
2,300.0	8.65	130.91	2,281.7	-165.9	250.2	-165.9	0.00	0.00	
2,400.0	8.65	130.91	2,380.5	-175.7	261.5	-175.7	0.00	0.00	
2,500.0	8.65	130.91	2,479.4	-185.6	272.9	-185.5	0.00	0.00	
2,600.0	8.65	130.91	2,578.3	-195.4	284.3	-195.4	0.00	0.00	
2,700.0	8.65	130.91	2,677.1	-205.3	295.6	-205.2	0.00	0.00	
2,800.0	8.65	130.91	2,776.0	-215.1	307.0	-215.1	0.00	0.00	
2,900.0	8.65	130.91	2,874.9	-225.0	318.4	-224.9	0.00	0.00	
3,000.0	8.65	130.91	2,973.7	-234.8	329.7	-234.8	0.00	0.00	
3,100.0	8.65	130.91	3,072.6	-244.7	341.1	-244.6	0.00	0.00	
3,200.0	8.65	130.91	3,171.4	-254.5	352.4	-254.5	0.00	0.00	
3,300.0	8.65	130.91	3,270.3	-264.4	363.8	-264.3	0.00	0.00	
3,400.0	8.65	130.91	3,369.2	-274.2	375.2	-274.2	0.00	0.00	
3,500.0	8.65	130.91	3,468.0	-284.1	386.5	-284.0	0.00	0.00	
3,600.0	8.65	130.91	3,566.9	-293.9	397.9	-293.9	0.00	0.00	
3,700.0	8.65	130.91	3,665.8	-303.8	409.3	-303.7	0.00	0.00	
3,800.0	8.65	130.91	3,764.6	-313.6	420.6	-313.6	0.00	0.00	
3,900.0	8.65	130.91	3,863.5	-323.5	432.0	-323.4	0.00	0.00	
4,000.0	8.65	130.91	3,962.3	-333.3	443.3	-333.3	0.00	0.00	
4,100.0	8.65	130.91	4,061.2	-343.1	454.7	-343.1	0.00	0.00	
4,200.0	8.65	130.91	4,160.1	-353.0	466.1	-353.0	0.00	0.00	
4,300.0	8.65	130.91	4,258.9	-362.8	477.4	-362.8	0.00	0.00	
4,400.0	8.65	130.91	4,357.8	-372.7	488.8	-372.6	0.00	0.00	
4,500.0	8.65	130.91	4,456.7	-382.5	500.2	-382.5	0.00	0.00	
4,600.0	8.65	130.91	4,555.5	-392.4	511.5	-392.3	0.00	0.00	
4,700.0	8.65	130.91	4,654.4	-402.2	522.9	-402.2	0.00	0.00	
4,800.0	8.65	130.91	4,753.3	-412.1	534.2	-412.0	0.00	0.00	
4,812.9	8.65	130.91	4,766.0	-413.3	535.7	-413.3	0.00	0.00	Sussex

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections)
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Project:	DJ Wattenberg	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4G-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,900.0	8.65	130.91	4,852.1	-421.9	545.6	-421.9	0.00	0.00	
5,000.0	8.65	130.91	4,951.0	-431.8	557.0	-431.7	0.00	0.00	
5,100.0	8.65	130.91	5,049.8	-441.6	568.3	-441.6	0.00	0.00	
5,129.5	8.65	130.91	5,079.0	-444.5	571.7	-444.5	0.00	0.00	Sussex Marker
5,200.0	8.65	130.91	5,148.7	-451.5	579.7	-451.4	0.00	0.00	
5,300.0	8.65	130.91	5,247.6	-461.3	591.1	-461.3	0.00	0.00	
5,400.0	8.65	130.91	5,346.4	-471.2	602.4	-471.1	0.00	0.00	
5,497.7	8.65	130.91	5,443.0	-480.8	613.5	-480.7	0.00	0.00	Shannon
5,500.0	8.65	130.91	5,445.3	-481.0	613.8	-481.0	0.00	0.00	
5,600.0	8.65	130.91	5,544.2	-490.9	625.1	-490.8	0.00	0.00	
5,700.0	8.65	130.91	5,643.0	-500.7	636.5	-500.7	0.00	0.00	
5,800.0	8.65	130.91	5,741.9	-510.6	647.9	-510.5	0.00	0.00	
5,900.0	8.65	130.91	5,840.7	-520.4	659.2	-520.4	0.00	0.00	
6,000.0	8.65	130.91	5,939.6	-530.2	670.6	-530.2	0.00	0.00	
6,100.0	8.65	130.91	6,038.5	-540.1	682.0	-540.1	0.00	0.00	
6,200.0	8.65	130.91	6,137.3	-549.9	693.3	-549.9	0.00	0.00	
6,300.0	8.65	130.91	6,236.2	-559.8	704.7	-559.7	0.00	0.00	
6,400.0	8.65	130.91	6,335.1	-569.6	716.0	-569.6	0.00	0.00	
6,500.0	8.65	130.91	6,433.9	-579.5	727.4	-579.4	0.00	0.00	
6,566.8	8.65	130.91	6,500.0	-586.1	735.0	-586.0	0.00	0.00	Teepee Buttes (*if present)
6,600.0	8.65	130.91	6,532.8	-589.3	738.8	-589.3	0.00	0.00	
6,700.0	8.65	130.91	6,631.7	-599.2	750.1	-599.1	0.00	0.00	
6,800.0	8.65	130.91	6,730.5	-609.0	761.5	-609.0	0.00	0.00	
6,900.0	8.65	130.91	6,829.4	-618.9	772.9	-618.8	0.00	0.00	
6,981.6	8.65	130.91	6,910.1	-626.9	782.1	-626.9	0.00	0.00	Start DLS 5.00 TFO -131.58
7,000.0	8.07	126.01	6,928.3	-628.6	784.2	-628.5	5.00	-3.16	
7,100.0	6.46	87.63	7,027.5	-632.5	795.5	-632.4	5.00	-1.61	
7,200.0	8.26	50.28	7,126.7	-627.6	806.7	-627.6	5.00	1.80	
7,300.0	12.02	31.14	7,225.2	-614.1	817.6	-614.1	5.00	3.76	
7,400.0	16.44	21.56	7,322.1	-592.1	828.2	-592.0	5.00	4.43	
7,500.0	21.12	16.05	7,416.8	-561.6	838.4	-561.5	5.00	4.68	
7,600.0	25.92	12.48	7,508.4	-522.9	848.1	-522.8	5.00	4.80	
7,643.3	28.01	11.29	7,547.0	-503.7	852.1	-503.6	5.00	4.84	Sharon Springs
7,681.0	29.85	10.39	7,580.0	-485.8	855.5	-485.7	5.00	4.86	Niobrara
7,700.0	30.77	9.97	7,596.4	-476.3	857.2	-476.3	5.00	4.87	
7,800.0	35.67	8.08	7,680.0	-422.2	865.8	-422.2	5.00	4.89	
7,900.0	40.58	6.60	7,758.7	-361.0	873.6	-361.0	5.00	4.92	
7,923.0	41.72	6.31	7,776.0	-346.0	875.3	-345.9	5.00	4.93	B Chalk
7,939.2	42.51	6.10	7,788.0	-335.2	876.5	-335.1	5.00	4.93	B Marl
7,989.6	45.00	5.51	7,824.4	-300.5	880.0	-300.5	5.00	4.93	Start DLS 8.00 TFO -8.86
8,000.0	45.83	5.33	7,831.7	-293.1	880.7	-293.1	8.00	7.91	
8,079.7	52.13	4.11	7,884.0	-233.2	885.6	-233.2	8.00	7.92	C Chalk
8,100.0	53.74	3.83	7,896.2	-217.1	886.7	-217.0	8.00	7.93	
8,109.8	54.52	3.70	7,902.0	-209.1	887.3	-209.1	8.00	7.93	C Marl
8,200.0	61.68	2.61	7,949.6	-132.7	891.4	-132.7	8.00	7.93	
8,300.0	69.62	1.55	7,990.8	-41.8	894.7	-41.7	8.00	7.94	
8,351.4	73.70	1.06	8,007.0	7.0	895.8	7.1	8.00	7.95	Ft. Hayes
8,400.0	77.57	0.60	8,019.1	54.1	896.5	54.1	8.00	7.95	
8,436.5	80.47	0.27	8,026.0	89.9	896.8	89.9	8.00	7.95	Codell
8,500.0	85.52	359.71	8,033.7	152.9	896.8	153.0	8.00	7.95	
8,556.4	90.00	359.22	8,036.0	209.2	896.2	209.3	8.00	7.95	LP @ 8036' TVD; 90°
8,600.0	90.00	359.22	8,036.0	252.9	895.6	252.9	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections)
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Project:	DJ Wattenberg	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4G-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

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
8,700.0	90.00	359.22	8,036.0	352.8	894.3	352.9	0.00	0.00	
8,800.0	90.00	359.22	8,036.0	452.8	892.9	452.9	0.00	0.00	
8,900.0	90.00	359.22	8,036.0	552.8	891.6	552.9	0.00	0.00	
9,000.0	90.00	359.22	8,036.0	652.8	890.2	652.9	0.00	0.00	
9,100.0	90.00	359.22	8,036.0	752.8	888.8	752.8	0.00	0.00	
9,200.0	90.00	359.22	8,036.0	852.8	887.5	852.8	0.00	0.00	
9,300.0	90.00	359.22	8,036.0	952.8	886.1	952.8	0.00	0.00	
9,400.0	90.00	359.22	8,036.0	1,052.8	884.7	1,052.8	0.00	0.00	
9,500.0	90.00	359.22	8,036.0	1,152.8	883.4	1,152.8	0.00	0.00	
9,600.0	90.00	359.22	8,036.0	1,252.8	882.0	1,252.8	0.00	0.00	
9,700.0	90.00	359.22	8,036.0	1,352.7	880.7	1,352.8	0.00	0.00	
9,800.0	90.00	359.22	8,036.0	1,452.7	879.3	1,452.8	0.00	0.00	
9,900.0	90.00	359.22	8,036.0	1,552.7	877.9	1,552.8	0.00	0.00	
10,000.0	90.00	359.22	8,036.0	1,652.7	876.6	1,652.8	0.00	0.00	
10,100.0	90.00	359.22	8,036.0	1,752.7	875.2	1,752.8	0.00	0.00	
10,200.0	90.00	359.22	8,036.0	1,852.7	873.8	1,852.7	0.00	0.00	
10,300.0	90.00	359.22	8,036.0	1,952.7	872.5	1,952.7	0.00	0.00	
10,400.0	90.00	359.22	8,036.0	2,052.7	871.1	2,052.7	0.00	0.00	
10,500.0	90.00	359.22	8,036.0	2,152.7	869.8	2,152.7	0.00	0.00	
10,600.0	90.00	359.22	8,036.0	2,252.7	868.4	2,252.7	0.00	0.00	
10,700.0	90.00	359.22	8,036.0	2,352.7	867.0	2,352.7	0.00	0.00	
10,800.0	90.00	359.22	8,036.0	2,452.6	865.7	2,452.7	0.00	0.00	
10,900.0	90.00	359.22	8,036.0	2,552.6	864.3	2,552.7	0.00	0.00	
11,000.0	90.00	359.22	8,036.0	2,652.6	862.9	2,652.7	0.00	0.00	
11,100.0	90.00	359.22	8,036.0	2,752.6	861.6	2,752.7	0.00	0.00	
11,200.0	90.00	359.22	8,036.0	2,852.6	860.2	2,852.7	0.00	0.00	
11,300.0	90.00	359.22	8,036.0	2,952.6	858.9	2,952.6	0.00	0.00	
11,400.0	90.00	359.22	8,036.0	3,052.6	857.5	3,052.6	0.00	0.00	
11,500.0	90.00	359.22	8,036.0	3,152.6	856.1	3,152.6	0.00	0.00	
11,600.0	90.00	359.22	8,036.0	3,252.6	854.8	3,252.6	0.00	0.00	
11,700.0	90.00	359.22	8,036.0	3,352.6	853.4	3,352.6	0.00	0.00	
11,800.0	90.00	359.22	8,036.0	3,452.6	852.0	3,452.6	0.00	0.00	
11,900.0	90.00	359.22	8,036.0	3,552.5	850.7	3,552.6	0.00	0.00	
12,000.0	90.00	359.22	8,036.0	3,652.5	849.3	3,652.6	0.00	0.00	
12,100.0	90.00	359.22	8,036.0	3,752.5	848.0	3,752.6	0.00	0.00	
12,200.0	90.00	359.22	8,036.0	3,852.5	846.6	3,852.6	0.00	0.00	
12,300.0	90.00	359.22	8,036.0	3,952.5	845.2	3,952.5	0.00	0.00	
12,400.0	90.00	359.22	8,036.0	4,052.5	843.9	4,052.5	0.00	0.00	
12,500.0	90.00	359.22	8,036.0	4,152.5	842.5	4,152.5	0.00	0.00	
12,600.0	90.00	359.22	8,036.0	4,252.5	841.1	4,252.5	0.00	0.00	
12,700.0	90.00	359.22	8,036.0	4,352.5	839.8	4,352.5	0.00	0.00	
12,800.0	90.00	359.22	8,036.0	4,452.5	838.4	4,452.5	0.00	0.00	
12,900.0	90.00	359.22	8,036.0	4,552.5	837.1	4,552.5	0.00	0.00	
13,000.0	90.00	359.22	8,036.0	4,652.4	835.7	4,652.5	0.00	0.00	
13,100.0	90.00	359.22	8,036.0	4,752.4	834.3	4,752.5	0.00	0.00	
13,200.0	90.00	359.22	8,036.0	4,852.4	833.0	4,852.5	0.00	0.00	
13,300.0	90.00	359.22	8,036.0	4,952.4	831.6	4,952.5	0.00	0.00	
13,400.0	90.00	359.22	8,036.0	5,052.4	830.2	5,052.4	0.00	0.00	
13,500.0	90.00	359.22	8,036.0	5,152.4	828.9	5,152.4	0.00	0.00	
13,600.0	90.00	359.22	8,036.0	5,252.4	827.5	5,252.4	0.00	0.00	
13,700.0	90.00	359.22	8,036.0	5,352.4	826.2	5,352.4	0.00	0.00	
13,800.0	90.00	359.22	8,036.0	5,452.4	824.8	5,452.4	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections)
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Project:	DJ Wattenberg	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4G-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

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
13,900.0	90.00	359.22	8,036.0	5,552.4	823.4	5,552.4	0.00	0.00	
14,000.0	90.00	359.22	8,036.0	5,652.3	822.1	5,652.4	0.00	0.00	
14,100.0	90.00	359.22	8,036.0	5,752.3	820.7	5,752.4	0.00	0.00	
14,200.0	90.00	359.22	8,036.0	5,852.3	819.3	5,852.4	0.00	0.00	
14,300.0	90.00	359.22	8,036.0	5,952.3	818.0	5,952.4	0.00	0.00	
14,400.0	90.00	359.22	8,036.0	6,052.3	816.6	6,052.4	0.00	0.00	
14,500.0	90.00	359.22	8,036.0	6,152.3	815.3	6,152.3	0.00	0.00	
14,600.0	90.00	359.22	8,036.0	6,252.3	813.9	6,252.3	0.00	0.00	
14,700.0	90.00	359.22	8,036.0	6,352.3	812.5	6,352.3	0.00	0.00	
14,800.0	90.00	359.22	8,036.0	6,452.3	811.2	6,452.3	0.00	0.00	
14,900.0	90.00	359.22	8,036.0	6,552.3	809.8	6,552.3	0.00	0.00	
15,000.0	90.00	359.22	8,036.0	6,652.3	808.5	6,652.3	0.00	0.00	
15,100.0	90.00	359.22	8,036.0	6,752.2	807.1	6,752.3	0.00	0.00	
15,200.0	90.00	359.22	8,036.0	6,852.2	805.7	6,852.3	0.00	0.00	
15,300.0	90.00	359.22	8,036.0	6,952.2	804.4	6,952.3	0.00	0.00	
15,400.0	90.00	359.22	8,036.0	7,052.2	803.0	7,052.3	0.00	0.00	
15,500.0	90.00	359.22	8,036.0	7,152.2	801.6	7,152.3	0.00	0.00	
15,600.0	90.00	359.22	8,036.0	7,252.2	800.3	7,252.2	0.00	0.00	
15,700.0	90.00	359.22	8,036.0	7,352.2	798.9	7,352.2	0.00	0.00	
15,800.0	90.00	359.22	8,036.0	7,452.2	797.6	7,452.2	0.00	0.00	
15,900.0	90.00	359.22	8,036.0	7,552.2	796.2	7,552.2	0.00	0.00	
16,000.0	90.00	359.22	8,036.0	7,652.2	794.8	7,652.2	0.00	0.00	
16,100.0	90.00	359.22	8,036.0	7,752.2	793.5	7,752.2	0.00	0.00	
16,200.0	90.00	359.22	8,036.0	7,852.1	792.1	7,852.2	0.00	0.00	
16,300.0	90.00	359.22	8,036.0	7,952.1	790.7	7,952.2	0.00	0.00	
16,400.0	90.00	359.22	8,036.0	8,052.1	789.4	8,052.2	0.00	0.00	
16,500.0	90.00	359.22	8,036.0	8,152.1	788.0	8,152.2	0.00	0.00	
16,600.0	90.00	359.22	8,036.0	8,252.1	786.7	8,252.1	0.00	0.00	
16,700.0	90.00	359.22	8,036.0	8,352.1	785.3	8,352.1	0.00	0.00	
16,800.0	90.00	359.22	8,036.0	8,452.1	783.9	8,452.1	0.00	0.00	
16,900.0	90.00	359.22	8,036.0	8,552.1	782.6	8,552.1	0.00	0.00	
17,000.0	90.00	359.22	8,036.0	8,652.1	781.2	8,652.1	0.00	0.00	
17,100.0	90.00	359.22	8,036.0	8,752.1	779.8	8,752.1	0.00	0.00	
17,200.0	90.00	359.22	8,036.0	8,852.1	778.5	8,852.1	0.00	0.00	
17,300.0	90.00	359.22	8,036.0	8,952.0	777.1	8,952.1	0.00	0.00	
17,400.0	90.00	359.22	8,036.0	9,052.0	775.8	9,052.1	0.00	0.00	
17,500.0	90.00	359.22	8,036.0	9,152.0	774.4	9,152.1	0.00	0.00	
17,600.0	90.00	359.22	8,036.0	9,252.0	773.0	9,252.1	0.00	0.00	
17,700.0	90.00	359.22	8,036.0	9,352.0	771.7	9,352.0	0.00	0.00	
17,800.0	90.00	359.22	8,036.0	9,452.0	770.3	9,452.0	0.00	0.00	
17,826.5	90.00	359.22	8,036.0	9,478.5	769.9	9,478.5	0.00	0.00	TD at 17826.5

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections)
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Project:	DJ Wattenberg	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4G-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

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
Pratt 4G-29H-P168 PBH	0.00	0.00	8,036.0	9,088.7	1,258.8	1,258,351.60	3,134,936.64	40.041550	-105.018074
- plan misses target center by 483.5ft at 17430.1ft MD (8036.0 TVD, 9082.1 N, 775.3 E)									
- Point									
Pratt 4G-29H-P168 PBH	0.00	0.00	8,036.0	9,478.5	769.9	1,258,738.73	3,134,445.69	40.042620	-105.019820
- plan hits target center									
- Point									
Pratt 4G-29H-P168 PBH	0.00	0.00	8,051.5	9,088.7	767.2	1,258,348.95	3,134,445.00	40.041550	-105.019830
- plan misses target center by 17.5ft at 17436.8ft MD (8036.0 TVD, 9088.8 N, 775.3 E)									
- Point									
Pratt 4G-29H TGT	0.00	0.00	7,824.4	-300.5	880.0	1,248,960.47	3,134,608.40	40.015775	-105.019428
- plan hits target center									
- Point									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
790.2	789.0	Fox Hills - BASE			
4,812.9	4,766.0	Sussex			
5,129.5	5,079.0	Sussex Marker			
5,497.7	5,443.0	Shannon			
6,566.8	6,500.0	Teepee Buttes (*if present)			
7,643.3	7,547.0	Sharon Springs			
7,681.0	7,580.0	Niobrara			
7,923.0	7,776.0	B Chalk			
7,939.2	7,788.0	B Marl			
8,079.7	7,884.0	C Chalk			
8,109.8	7,902.0	C Marl			
8,351.4	8,007.0	Ft. Hayes			
8,436.5	8,026.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
400.0	400.0	0.0	58.8	KOP @ 400'
832.4	830.7	-21.4	83.4	EOB: Inc=8.65°
6,981.6	6,910.1	-626.9	782.1	Start DLS 5.00 TFO -131.58
7,989.6	7,824.4	-300.5	880.0	Start DLS 8.00 TFO -8.86
8,556.4	8,036.0	209.2	896.2	LP @ 8036' TVD; 90°
17,826.5	8,036.0	9,478.5	769.9	TD at 17826.5

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S29-T1N-R68W (Pratt/Waste Connections)
Pratt 4G-29H-P168
Hz
Plan #3

Anticollision Report

20 November, 2014

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Reference	Plan #3

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 1,000.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 11/20/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	17,826.5	Plan #3 (Hz)	MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**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
S29-T1N-R68W (Pratt/Waste Connections)						
COSTIGAN 0-6-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 0-8-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 13-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 14-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 23-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 24-20 (EXISTING) - ENCANA WELL - ENCA						Out of range
COSTIGAN 33-20 (EXISTING) - ENCANA WELL - ENCA						Out of range
COSTIGAN 34-20 (EXISTING) - ENCANA WELL - SURV						Out of range
COSTIGAN 43-20 (EXISTING) - ENCANA WELL - SURV	14,981.0	8,201.2	229.7	87.6	1.616	CC, ES, SF
COSTIGAN 4-6-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - SUR	13,118.6	8,164.6	981.4	874.4	9.171	CC, ES
COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - SUR	13,300.0	8,169.5	998.0	887.8	9.062	SF
COSTIGAN 8-6-20 (EXISTING) - ENCANA WELL - SUR	14,317.1	8,161.2	307.8	184.6	2.497	CC, ES, SF
COSTIGAN 8-8-20 (EXISTING) - ENCANA WELL - SUR	13,080.5	8,256.5	258.4	151.3	2.412	CC, ES
COSTIGAN 8-8-20 (EXISTING) - ENCANA WELL - SUR	13,100.0	8,256.5	259.2	151.7	2.412	SF
COSTIGAN E UNIT 1 (EXISTING) - ENCANA WELL - NO						Out of range
COSTIGAN H UNIT 1 (EXISTING) - VESSELS WELL - N						Out of range
EDWARD P COSTIGAN 1 (EXISTING) - ENCANA WELL	13,979.7	8,041.5	681.1	565.3	5.881	CC
EDWARD P COSTIGAN 1 (EXISTING) - ENCANA WELL	14,000.0	8,041.6	681.4	565.3	5.865	ES, SF
M E DRIER 1 (EXISTING) - SYNERGY WELL - GYRO	11,422.9	8,034.4	759.3	687.5	10.579	CC, ES
M E DRIER 1 (EXISTING) - SYNERGY WELL - GYRO	11,600.0	8,025.1	779.6	704.9	10.429	SF
PRATT 0-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
PRATT 1 (EXISTING) - SYNERGY WELL - NO SURVEY						Out of range
PRATT 12-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 2 (EXISTING) - SYNERGY WELL - NO SURVEY						Out of range
PRATT 2-0-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
PRATT 21-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 22-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 2-4-29 (EXISTING) - ENCANA WELL - PLAN ON						Out of range
PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURV	400.0	372.5	307.1	305.8	236.447	CC, ES
PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURV	8,900.0	8,008.5	844.4	811.9	25.997	SF
PRATT 4-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
Pratt 4B-29H-P168 - Hz - Plan #1	300.0	284.5	47.6	46.7	50.242	CC, ES
Pratt 4B-29H-P168 - Hz - Plan #1	600.0	582.1	58.7	56.7	29.335	SF
Pratt 4C-29H-P168 - Hz - Plan #4 Ext	400.0	400.0	39.2	37.9	30.238	CC, ES
Pratt 4C-29H-P168 - Hz - Plan #4 Ext	600.0	598.7	47.2	45.2	23.596	SF
Pratt 4D-29H-P168 - Hz - Plan #2	400.0	400.0	28.0	26.7	21.599	CC, ES
Pratt 4D-29H-P168 - Hz - Plan #2	600.0	599.6	33.9	31.9	16.965	SF
Pratt 4E-29H-P168 - Hz - Plan #4 Ext	400.0	400.0	19.6	18.3	15.119	CC, ES
Pratt 4E-29H-P168 - Hz - Plan #4 Ext	17,827.1	17,875.1	756.1	418.7	2.241	SF
Pratt 4F-29H-P168 - Hz - Plan #2	400.0	400.0	8.4	7.1	6.480	CC, ES
Pratt 4F-29H-P168 - Hz - Plan #2	17,400.0	17,003.3	601.7	378.6	2.697	SF
PRATT F UNIT 1 (EXISTING) - ENCANA WELL - NO SU						Out of range
SRC PRATT 13-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 14-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 24-29 PD (EXISTING) - SYNERGY WELL -						Out of range
SRC PRATT 29HD (EXISTING) - SYNERGY WELL - PL						Out of range
SRC PRATT 29LD (EXISTING) - SYNERGY WELL - PLA						Out of range
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU	523.9	524.0	317.8	316.0	171.070	CC, ES
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU	1,300.0	1,204.8	479.2	473.5	83.535	SF
SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PL						Out of range
SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SU	10,414.3	8,194.2	971.6	909.5	15.641	CC, ES
SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SU	10,600.0	8,197.4	989.2	924.0	15.176	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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**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
S29-T1N-R68W (Pratt/Waste Connections)						
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	2,348.4	2,386.5	264.8	255.2	27.515	CC
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	2,400.0	2,437.1	265.0	255.1	26.612	ES
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	3,500.0	3,506.2	372.4	353.4	19.539	SF
SRC PRATT 29XD (EXISTING) - SYNERGY WELL - GY	100.0	73.8	285.1	284.9	1,123.800	CC
SRC PRATT 29XD (EXISTING) - SYNERGY WELL - GY	9,036.2	8,145.5	317.3	281.3	8.813	ES
SRC PRATT 29XD (EXISTING) - SYNERGY WELL - GY	9,100.0	8,146.3	323.7	286.9	8.798	SF
SRC PRATT 31-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 32-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 33-29PD (EXISTING) - SYNERGY WELL -	100.0	87.1	342.2	341.9	1,309.817	CC, ES
SRC PRATT 33-29PD (EXISTING) - SYNERGY WELL -	1,600.0	1,475.2	552.1	546.4	98.266	SF
SRC PRATT 34-29D (EXISTING) - SYNERGY WELL - S	434.0	411.1	316.9	315.5	221.858	CC, ES
SRC PRATT 34-29D (EXISTING) - SYNERGY WELL - S	3,100.0	2,978.2	739.2	726.4	57.723	SF
SRC PRATT 41-29D (EXISTING) - SYNERGY WELL - S	12,395.7	8,185.2	379.5	282.4	3.909	CC
SRC PRATT 41-29D (EXISTING) - SYNERGY WELL - S	12,400.0	8,185.3	379.5	282.4	3.906	ES, SF
SRC PRATT 42-29D (EXISTING) - SYNERGY WELL - S	10,874.4	8,131.4	181.2	116.2	2.789	CC, ES, SF
SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - S	9,722.0	8,183.3	273.8	220.6	5.153	CC, ES, SF
SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - P	400.0	376.5	276.3	275.0	211.661	CC
SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - P	7,986.9	7,712.6	277.4	252.2	11.007	ES, SF
Waste Connections 3A-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3B-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3C-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3D-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3E-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3F-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3G-29H-M168 - Hz - Plan #1						Out of range
WILLIAM H PELTIER 1 (EXISTING) - VESSELS WELL -	16,986.9	8,017.5	763.5	595.4	4.540	CC
WILLIAM H PELTIER 1 (EXISTING) - VESSELS WELL -	17,000.0	8,017.5	763.6	595.2	4.534	ES, SF
WILLIAM H PELTIER 2 (EXISTING) - ENCANA WELL - P						Out of range
WILLIAM H PELTIER 2 (EXISTING) - ENCANA WELL - S						Out of range
WILLIAM PELTIER 11-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 12-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 12-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WEL	17,400.0	7,975.3	330.2	279.1	6.466	ES, SF
WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WEL	17,412.3	7,974.2	330.0	279.2	6.505	CC
WILLIAM PELTIER 2-0-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 22-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 2-4-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 4-2-20 (EXISTING) - ENCANA WELL						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 43-20 (EXISTING) - ENCANA WELL - SURVE

Offset Site Error: 0.0 ft

Survey Program: 88-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	8,036.0	8,196.3	8,043.4	104.9	24.4	-89.74	6,630.1	579.0	910.5	783.7	126.81	7.180	
14,200.0	8,036.0	8,196.8	8,044.0	106.6	24.4	-89.88	6,630.1	579.0	814.1	685.5	128.55	6.333	
14,300.0	8,036.0	8,197.4	8,044.6	108.4	24.4	-90.02	6,630.1	579.0	718.7	588.4	130.29	5.516	
14,400.0	8,036.0	8,197.9	8,045.1	110.1	24.4	-90.16	6,630.1	579.0	624.8	492.7	132.03	4.732	
14,500.0	8,036.0	8,198.5	8,045.7	111.8	24.4	-90.30	6,630.1	579.0	533.0	399.3	133.77	3.985	
14,600.0	8,036.0	8,199.1	8,046.3	113.5	24.4	-90.44	6,630.1	579.0	444.9	309.4	135.51	3.283	
14,700.0	8,036.0	8,199.6	8,046.8	115.3	24.4	-90.58	6,630.2	579.0	363.0	225.7	137.25	2.644	
14,800.0	8,036.0	8,200.2	8,047.4	117.0	24.4	-90.73	6,630.2	579.1	292.5	153.5	138.99	2.104	
14,900.0	8,036.0	8,200.8	8,048.0	118.7	24.4	-90.87	6,630.2	579.1	243.6	102.8	140.73	1.731	
14,981.0	8,036.0	8,201.2	8,048.4	120.1	24.4	-90.98	6,630.2	579.1	229.7	87.6	142.14	1.616	CC, ES, SF
15,000.0	8,036.0	8,201.3	8,048.5	120.4	24.4	-91.01	6,630.2	579.1	230.5	88.0	142.46	1.618	
15,100.0	8,036.0	8,201.9	8,049.1	122.2	24.4	-91.15	6,630.2	579.1	258.7	114.5	144.20	1.794	
15,200.0	8,036.0	8,202.5	8,049.7	123.9	24.4	-91.29	6,630.2	579.1	317.3	171.4	145.94	2.174	
15,300.0	8,036.0	8,203.0	8,050.2	125.6	24.4	-91.43	6,630.2	579.1	393.1	245.4	147.67	2.662	
15,400.0	8,036.0	8,203.6	8,050.8	127.4	24.4	-91.57	6,630.2	579.1	477.8	328.4	149.41	3.198	
15,500.0	8,036.0	8,204.2	8,051.3	129.1	24.4	-91.71	6,630.2	579.1	567.5	416.4	151.14	3.755	
15,600.0	8,036.0	8,204.7	8,051.9	130.8	24.4	-91.85	6,630.2	579.1	660.2	507.3	152.88	4.319	
15,700.0	8,036.0	8,205.3	8,052.5	132.6	24.4	-91.99	6,630.2	579.1	754.8	600.1	154.61	4.882	
15,800.0	8,036.0	8,205.9	8,053.0	134.3	24.4	-92.13	6,630.2	579.1	850.6	694.2	156.34	5.440	
15,900.0	8,036.0	8,206.4	8,053.6	136.0	24.4	-92.28	6,630.2	579.2	947.2	789.2	158.07	5.992	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - SURV

Survey Program: 134-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
13,000.0	8,036.0	8,161.4	8,067.3	86.1	20.8	-91.04	4,757.6	-147.0	988.5	883.6	104.95	9.418	
13,100.0	8,036.0	8,164.1	8,070.0	87.8	20.8	-91.20	4,757.7	-147.0	981.5	874.9	106.68	9.201	
13,118.6	8,036.0	8,164.6	8,070.5	88.1	20.8	-91.23	4,757.7	-147.0	981.4	874.4	107.00	9.171	CC, ES
13,200.0	8,036.0	8,166.8	8,072.7	89.5	20.8	-91.36	4,757.7	-146.9	984.7	876.3	108.41	9.084	
13,300.0	8,036.0	8,169.5	8,075.4	91.2	20.8	-91.51	4,757.8	-146.9	998.0	887.8	110.13	9.062	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 8-6-20 (EXISTING) - ENCANA WELL - SURV

Offset Site Error: 0.0 ft

Survey Program: 134-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
13,400.0	8,036.0	8,154.3	8,030.9	92.9	23.8	87.47	5,973.5	1,125.3	967.3	860.0	107.30	9.016	
13,500.0	8,036.0	8,155.1	8,031.6	94.6	23.8	87.61	5,973.5	1,125.3	873.1	764.1	109.04	8.008	
13,600.0	8,036.0	8,155.8	8,032.4	96.3	23.8	87.75	5,973.6	1,125.4	780.3	669.6	110.78	7.044	
13,700.0	8,036.0	8,156.6	8,033.2	98.0	23.8	87.89	5,973.6	1,125.4	689.6	577.1	112.52	6.129	
13,800.0	8,036.0	8,157.3	8,033.9	99.8	23.8	88.03	5,973.6	1,125.4	601.8	487.5	114.26	5.267	
13,900.0	8,036.0	8,158.1	8,034.7	101.5	23.8	88.17	5,973.6	1,125.4	518.4	402.4	116.00	4.469	
14,000.0	8,036.0	8,158.8	8,035.4	103.2	23.8	88.31	5,973.6	1,125.4	441.9	324.2	117.74	3.753	
14,100.0	8,036.0	8,159.6	8,036.2	104.9	23.8	88.45	5,973.6	1,125.4	376.7	257.2	119.48	3.152	
14,200.0	8,036.0	8,160.3	8,036.9	106.6	23.8	88.59	5,973.6	1,125.5	329.3	208.1	121.22	2.717	
14,300.0	8,036.0	8,161.1	8,037.7	108.4	23.8	88.73	5,973.6	1,125.5	308.3	185.3	122.97	2.507	
14,317.1	8,036.0	8,161.2	8,037.8	108.7	23.8	88.75	5,973.6	1,125.5	307.8	184.6	123.26	2.497	CC, ES, SF
14,400.0	8,036.0	8,161.8	8,038.4	110.1	23.8	88.87	5,973.6	1,125.5	318.8	194.1	124.71	2.556	
14,500.0	8,036.0	8,162.6	8,039.1	111.8	23.8	89.01	5,973.6	1,125.5	358.1	231.6	126.45	2.832	
14,600.0	8,036.0	8,163.3	8,039.9	113.5	23.8	89.14	5,973.6	1,125.5	418.1	289.9	128.19	3.261	
14,700.0	8,036.0	8,164.1	8,040.6	115.3	23.8	89.28	5,973.6	1,125.5	491.3	361.4	129.94	3.781	
14,800.0	8,036.0	8,164.8	8,041.4	117.0	23.8	89.42	5,973.6	1,125.6	572.7	441.0	131.68	4.349	
14,900.0	8,036.0	8,165.5	8,042.1	118.7	23.8	89.56	5,973.6	1,125.6	659.2	525.8	133.42	4.941	
15,000.0	8,036.0	8,166.3	8,042.8	120.4	23.8	89.69	5,973.6	1,125.6	749.1	613.9	135.16	5.542	
15,100.0	8,036.0	8,167.0	8,043.6	122.2	23.8	89.83	5,973.6	1,125.6	841.2	704.3	136.90	6.145	
15,200.0	8,036.0	8,167.7	8,044.3	123.9	23.8	89.97	5,973.6	1,125.6	935.0	796.4	138.64	6.744	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 8-8-20 (EXISTING) - ENCANA WELL - SURV

Offset Site Error: 0.0 ft

Survey Program: 104-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
12,200.0	8,036.0	8,255.3	8,052.5	72.5	26.8	88.89	4,736.5	1,093.0	917.7	825.7	91.94	9.981	
12,300.0	8,036.0	8,255.4	8,052.6	74.2	26.8	88.92	4,736.5	1,093.0	822.2	728.5	93.66	8.779	
12,400.0	8,036.0	8,255.6	8,052.7	75.9	26.8	88.95	4,736.5	1,093.0	727.9	632.6	95.38	7.632	
12,500.0	8,036.0	8,255.7	8,052.9	77.6	26.8	88.98	4,736.5	1,093.0	635.4	538.3	97.10	6.544	
12,600.0	8,036.0	8,255.8	8,053.0	79.3	26.8	89.01	4,736.5	1,093.0	545.6	446.8	98.82	5.521	
12,700.0	8,036.0	8,256.0	8,053.1	81.0	26.8	89.04	4,736.5	1,093.0	460.0	359.4	100.55	4.575	
12,800.0	8,036.0	8,256.1	8,053.3	82.7	26.8	89.07	4,736.5	1,093.0	381.4	279.1	102.27	3.729	
12,900.0	8,036.0	8,256.2	8,053.4	84.4	26.8	89.09	4,736.5	1,093.0	315.2	211.2	104.00	3.031	
13,000.0	8,036.0	8,256.4	8,053.5	86.1	26.8	89.12	4,736.5	1,093.0	270.7	164.9	105.73	2.560	
13,080.5	8,036.0	8,256.5	8,053.6	87.4	26.8	89.15	4,736.5	1,093.0	258.4	151.3	107.12	2.412	CC, ES
13,100.0	8,036.0	8,256.5	8,053.7	87.8	26.8	89.15	4,736.5	1,093.0	259.2	151.7	107.46	2.412	SF
13,200.0	8,036.0	8,256.6	8,053.8	89.5	26.8	89.18	4,736.5	1,093.0	284.7	175.5	109.19	2.607	
13,300.0	8,036.0	8,256.8	8,053.9	91.2	26.8	89.21	4,736.5	1,093.0	339.1	228.1	110.92	3.057	
13,400.0	8,036.0	8,256.9	8,054.0	92.9	26.8	89.24	4,736.5	1,093.0	410.9	298.3	112.65	3.648	
13,500.0	8,036.0	8,257.0	8,054.2	94.6	26.8	89.27	4,736.5	1,093.0	492.7	378.3	114.39	4.307	
13,600.0	8,036.0	8,257.2	8,054.3	96.3	26.8	89.30	4,736.5	1,093.0	580.2	464.1	116.12	4.997	
13,700.0	8,036.0	8,257.3	8,054.4	98.0	26.8	89.33	4,736.5	1,093.0	671.2	553.4	117.85	5.695	
13,800.0	8,036.0	8,257.4	8,054.6	99.8	26.8	89.36	4,736.5	1,093.0	764.5	644.9	119.59	6.393	
13,900.0	8,036.0	8,257.6	8,054.7	101.5	26.8	89.39	4,736.5	1,093.0	859.3	737.9	121.33	7.082	
14,000.0	8,036.0	8,257.7	8,054.9	103.2	26.8	89.42	4,736.5	1,093.0	955.1	832.0	123.06	7.761	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - EDWARD P COSTIGAN 1 (EXISTING) - ENCANA WELL

Offset Site Error: 0.0 ft

Survey Program: 100-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
13,300.0	8,036.0	8,038.2	8,037.1	91.2	14.1	-89.46	5,622.7	141.3	962.2	858.2	104.03	9.250	
13,400.0	8,036.0	8,038.7	8,037.6	92.9	14.1	-89.51	5,622.7	141.3	894.4	788.6	105.76	8.457	
13,500.0	8,036.0	8,039.2	8,038.1	94.6	14.1	-89.55	5,622.7	141.3	833.1	725.6	107.50	7.750	
13,600.0	8,036.0	8,039.7	8,038.6	96.3	14.1	-89.59	5,622.7	141.3	779.8	670.6	109.23	7.139	
13,700.0	8,036.0	8,040.2	8,039.1	98.0	14.1	-89.63	5,622.7	141.3	736.3	625.3	110.97	6.635	
13,800.0	8,036.0	8,040.7	8,039.5	99.8	14.1	-89.67	5,622.7	141.3	704.4	591.7	112.70	6.250	
13,900.0	8,036.0	8,041.1	8,040.0	101.5	14.1	-89.71	5,622.7	141.3	685.8	571.3	114.44	5.992	
13,979.7	8,036.0	8,041.5	8,040.4	102.8	14.1	-89.74	5,622.7	141.3	681.1	565.3	115.83	5.881	CC
14,000.0	8,036.0	8,041.6	8,040.5	103.2	14.1	-89.75	5,622.7	141.3	681.4	565.3	116.18	5.865	ES, SF
14,100.0	8,036.0	8,042.1	8,041.0	104.9	14.1	-89.79	5,622.7	141.3	691.7	573.8	117.92	5.866	
14,200.0	8,036.0	8,042.6	8,041.4	106.6	14.1	-89.83	5,622.7	141.3	715.9	596.2	119.66	5.983	
14,300.0	8,036.0	8,043.0	8,041.9	108.4	14.1	-89.87	5,622.7	141.3	752.7	631.3	121.40	6.200	
14,400.0	8,036.0	8,043.5	8,042.4	110.1	14.1	-89.91	5,622.7	141.3	800.4	677.3	123.13	6.500	
14,500.0	8,036.0	8,043.9	8,042.8	111.8	14.1	-89.94	5,622.7	141.3	857.1	732.3	124.87	6.864	
14,600.0	8,036.0	8,044.4	8,043.3	113.5	14.1	-89.98	5,622.7	141.3	921.3	794.7	126.62	7.276	
14,700.0	8,036.0	8,044.8	8,043.7	115.3	14.1	-90.02	5,622.7	141.3	991.4	863.0	128.36	7.724	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - M E DRIER 1 (EXISTING) - SYNERGY WELL - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-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
10,800.0	8,036.0	8,065.1	8,063.6	49.5	14.1	-91.82	3,063.7	97.8	981.6	920.3	61.31	16.011	
10,900.0	8,036.0	8,060.4	8,058.9	51.1	14.1	-91.47	3,063.9	97.8	921.5	858.6	62.98	14.633	
11,000.0	8,036.0	8,055.6	8,054.1	52.7	14.1	-91.11	3,064.1	97.9	868.9	804.2	64.66	13.438	
11,100.0	8,036.0	8,050.8	8,049.3	54.3	14.1	-90.74	3,064.3	97.9	824.9	758.6	66.34	12.436	
11,200.0	8,036.0	8,045.8	8,044.3	55.9	14.1	-90.36	3,064.6	97.9	791.2	723.2	68.02	11.633	
11,300.0	8,036.0	8,040.8	8,039.3	57.6	14.1	-89.98	3,064.8	98.0	769.1	699.4	69.70	11.035	
11,400.0	8,036.0	8,035.6	8,034.1	59.2	14.1	-89.60	3,065.1	98.0	759.6	688.2	71.39	10.641	
11,422.9	8,036.0	8,034.4	8,033.0	59.6	14.1	-89.51	3,065.1	98.0	759.3	687.5	71.77	10.579	CC, ES
11,500.0	8,036.0	8,030.4	8,028.9	60.9	14.0	-89.21	3,065.3	98.0	763.2	690.1	73.07	10.444	
11,600.0	8,036.0	8,025.1	8,023.6	62.5	14.0	-88.81	3,065.6	98.1	779.6	704.9	74.75	10.429	SF
11,700.0	8,036.0	8,019.7	8,018.2	64.2	14.0	-88.40	3,065.9	98.1	808.1	731.7	76.44	10.573	
11,800.0	8,036.0	8,014.2	8,012.7	65.8	14.0	-87.98	3,066.1	98.2	847.6	769.4	78.12	10.850	
11,900.0	8,036.0	8,008.6	8,007.2	67.5	14.0	-87.56	3,066.4	98.2	896.4	816.6	79.80	11.234	
12,000.0	8,036.0	8,002.9	8,001.5	69.2	14.0	-87.13	3,066.7	98.3	953.2	871.8	81.47	11.700	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURVE

Offset Site Error: 0.0 ft

Survey Program: 8615-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	4.71	306.0	84.0	308.3				
100.0	100.0	72.5	72.5	0.1	0.1	4.71	306.0	84.0	307.1	306.8	0.25	1,220.861	
200.0	200.0	172.5	172.5	0.3	0.3	4.71	306.0	84.0	307.1	306.5	0.60	511.295	
300.0	300.0	272.5	272.5	0.5	0.5	4.71	306.0	84.0	307.1	306.1	0.95	323.358	
400.0	400.0	372.5	372.5	0.6	0.7	4.71	306.0	84.0	307.1	305.8	1.30	236.447	CC, ES
500.0	500.0	472.5	472.5	0.8	0.8	-126.45	306.0	84.0	308.1	306.5	1.65	186.850	
600.0	599.8	572.3	572.3	1.0	1.0	-127.18	306.0	84.0	311.3	309.2	2.01	155.151	
700.0	699.5	672.0	672.0	1.2	1.2	-128.35	306.0	84.0	316.6	314.2	2.38	133.200	
800.0	798.7	771.2	771.2	1.5	1.3	-129.91	306.0	84.0	324.3	321.6	2.77	117.248	
832.4	830.7	803.2	803.2	1.6	1.4	-130.49	306.0	84.0	327.4	324.5	2.89	113.091	
900.0	897.6	870.1	870.1	1.8	1.5	-131.80	306.0	84.0	334.1	330.9	3.17	105.520	
1,000.0	996.5	969.0	969.0	2.0	1.7	-133.66	306.0	84.0	344.4	340.8	3.57	96.509	
1,100.0	1,095.3	1,067.8	1,067.8	2.3	1.9	-135.40	306.0	84.0	355.0	351.0	3.97	89.448	
1,200.0	1,194.2	1,166.7	1,166.7	2.6	2.0	-137.05	306.0	84.0	365.9	361.5	4.37	83.814	
1,300.0	1,293.0	1,265.5	1,265.5	2.9	2.2	-138.60	306.0	84.0	377.1	372.3	4.76	79.243	
1,400.0	1,391.9	1,364.4	1,364.4	3.2	2.4	-140.06	306.0	84.0	388.6	383.4	5.15	75.480	
1,500.0	1,490.8	1,463.3	1,463.3	3.6	2.6	-141.43	306.0	84.0	400.3	394.7	5.53	72.343	
1,600.0	1,589.6	1,562.1	1,562.1	3.9	2.7	-142.73	306.0	84.0	412.2	406.3	5.91	69.697	
1,700.0	1,688.5	1,661.0	1,661.0	4.2	2.9	-143.96	306.0	84.0	424.3	418.0	6.29	67.443	
1,800.0	1,787.4	1,759.9	1,759.9	4.5	3.1	-145.11	306.0	84.0	436.6	429.9	6.66	65.506	
1,900.0	1,886.2	1,858.7	1,858.7	4.8	3.2	-146.21	306.0	84.0	449.0	442.0	7.04	63.828	
2,000.0	1,985.1	1,957.6	1,957.6	5.1	3.4	-147.24	306.0	84.0	461.6	454.2	7.40	62.363	
2,100.0	2,083.9	2,056.4	2,056.4	5.4	3.6	-148.22	306.0	84.0	474.4	466.6	7.77	61.076	
2,200.0	2,182.8	2,155.3	2,155.3	5.7	3.8	-149.15	306.0	84.0	487.3	479.2	8.13	59.939	
2,300.0	2,281.7	2,254.2	2,254.2	6.1	3.9	-150.03	306.0	84.0	500.3	491.8	8.49	58.928	
2,400.0	2,380.5	2,353.0	2,353.0	6.4	4.1	-150.87	306.0	84.0	513.4	504.6	8.85	58.025	
2,500.0	2,479.4	2,451.9	2,451.9	6.7	4.3	-151.66	306.0	84.0	526.6	517.4	9.20	57.215	
2,600.0	2,578.3	2,550.8	2,550.8	7.0	4.5	-152.42	306.0	84.0	539.9	530.4	9.56	56.485	
2,700.0	2,677.1	2,649.6	2,649.6	7.3	4.6	-153.14	306.0	84.0	553.3	543.4	9.91	55.824	
2,800.0	2,776.0	2,748.5	2,748.5	7.6	4.8	-153.82	306.0	84.0	566.8	556.6	10.26	55.224	
2,900.0	2,874.9	2,847.4	2,847.4	7.9	5.0	-154.47	306.0	84.0	580.4	569.8	10.61	54.677	
3,000.0	2,973.7	2,946.2	2,946.2	8.3	5.1	-155.10	306.0	84.0	594.0	583.1	10.96	54.177	
3,100.0	3,072.6	3,045.1	3,045.1	8.6	5.3	-155.69	306.0	84.0	607.7	596.4	11.31	53.718	
3,200.0	3,171.4	3,143.9	3,143.9	8.9	5.5	-156.26	306.0	84.0	621.5	609.8	11.66	53.295	
3,300.0	3,270.3	3,242.8	3,242.8	9.2	5.7	-156.81	306.0	84.0	635.3	623.3	12.01	52.905	
3,400.0	3,369.2	3,341.7	3,341.7	9.5	5.8	-157.33	306.0	84.0	649.2	636.8	12.35	52.545	
3,500.0	3,468.0	3,440.5	3,440.5	9.8	6.0	-157.83	306.0	84.0	663.1	650.4	12.70	52.210	
3,600.0	3,566.9	3,539.4	3,539.4	10.1	6.2	-158.31	306.0	84.0	677.1	664.0	13.05	51.899	
3,700.0	3,665.8	3,638.3	3,638.3	10.5	6.4	-158.77	306.0	84.0	691.1	677.7	13.39	51.609	
3,800.0	3,764.6	3,737.1	3,737.1	10.8	6.5	-159.21	306.0	84.0	705.1	691.4	13.73	51.339	
3,900.0	3,863.5	3,836.0	3,836.0	11.1	6.7	-159.64	306.0	84.0	719.2	705.1	14.08	51.086	
4,000.0	3,962.3	3,934.8	3,934.8	11.4	6.9	-160.04	306.0	84.0	733.4	718.9	14.42	50.848	
4,100.0	4,061.2	4,033.7	4,033.7	11.7	7.0	-160.44	306.0	84.0	747.5	732.8	14.77	50.625	
4,200.0	4,160.1	4,132.6	4,132.6	12.0	7.2	-160.81	306.0	84.0	761.7	746.6	15.11	50.416	
4,300.0	4,258.9	4,231.4	4,231.4	12.4	7.4	-161.18	306.0	84.0	776.0	760.5	15.45	50.218	
4,400.0	4,357.8	4,330.3	4,330.3	12.7	7.6	-161.53	306.0	84.0	790.2	774.4	15.79	50.032	
4,500.0	4,456.7	4,429.2	4,429.2	13.0	7.7	-161.87	306.0	84.0	804.5	788.4	16.14	49.855	
4,600.0	4,555.5	4,528.0	4,528.0	13.3	7.9	-162.20	306.0	84.0	818.8	802.4	16.48	49.688	
4,700.0	4,654.4	4,626.9	4,626.9	13.6	8.1	-162.51	306.0	84.0	833.2	816.4	16.82	49.530	
4,800.0	4,753.3	4,725.8	4,725.8	13.9	8.2	-162.82	306.0	84.0	847.5	830.4	17.16	49.380	
4,900.0	4,852.1	4,824.6	4,824.6	14.3	8.4	-163.11	306.0	84.0	861.9	844.4	17.51	49.237	
5,000.0	4,951.0	4,923.5	4,923.5	14.6	8.6	-163.40	306.0	84.0	876.3	858.5	17.85	49.101	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURVE

Offset Site Error: 0.0 ft

Survey Program: 8615-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	5,049.8	5,022.3	5,022.3	14.9	8.8	-163.67	306.0	84.0	890.8	872.6	18.19	48.972	
5,200.0	5,148.7	5,121.2	5,121.2	15.2	8.9	-163.94	306.0	84.0	905.2	886.7	18.53	48.848	
5,300.0	5,247.6	5,220.1	5,220.1	15.5	9.1	-164.20	306.0	84.0	919.7	900.8	18.87	48.731	
5,400.0	5,346.4	5,318.9	5,318.9	15.8	9.3	-164.45	306.0	84.0	934.2	915.0	19.22	48.618	
5,500.0	5,445.3	5,417.8	5,417.8	16.1	9.5	-164.69	306.0	84.0	948.7	929.1	19.56	48.510	
5,600.0	5,544.2	5,516.7	5,516.7	16.5	9.6	-164.93	306.0	84.0	963.2	943.3	19.90	48.407	
5,700.0	5,643.0	5,615.5	5,615.5	16.8	9.8	-165.16	306.0	84.0	977.8	957.5	20.24	48.308	
5,800.0	5,741.9	5,714.4	5,714.4	17.1	10.0	-165.38	306.0	84.0	992.3	971.7	20.58	48.213	
8,000.0	7,831.7	7,804.2	7,804.2	20.6	13.6	-66.78	306.0	84.0	996.8	970.3	26.53	37.577	
8,050.0	7,865.3	7,837.8	7,837.8	20.6	13.7	-69.12	306.0	84.0	977.7	951.0	26.72	36.592	
8,100.0	7,896.2	7,868.7	7,868.7	20.5	13.7	-71.67	306.0	84.0	958.1	931.1	26.96	35.538	
8,150.0	7,924.4	7,896.9	7,896.9	20.5	13.8	-74.33	306.0	84.0	938.4	911.1	27.23	34.458	
8,200.0	7,949.6	7,922.1	7,922.1	20.5	13.8	-77.02	306.0	84.0	918.9	891.4	27.52	33.393	
8,250.0	7,971.8	7,944.3	7,944.3	20.6	13.9	-79.65	306.0	84.0	900.0	872.2	27.80	32.374	
8,300.0	7,990.8	7,963.3	7,963.3	20.6	13.9	-82.12	306.0	84.0	882.1	854.1	28.07	31.425	
8,350.0	8,006.6	7,979.1	7,979.1	20.7	13.9	-84.37	306.0	84.0	865.5	837.2	28.33	30.555	
8,400.0	8,019.1	7,991.6	7,991.6	20.8	13.9	-86.32	306.0	84.0	850.6	822.1	28.58	29.768	
8,450.0	8,028.1	8,000.6	8,000.6	21.0	14.0	-87.92	306.0	84.0	837.7	808.9	28.83	29.060	
8,500.0	8,033.7	8,006.2	8,006.2	21.1	14.0	-89.13	306.0	84.0	827.0	797.9	29.09	28.430	
8,550.0	8,035.9	8,008.4	8,008.4	21.3	14.0	-89.93	306.0	84.0	818.8	789.4	29.37	27.875	
8,556.4	8,036.0	8,008.5	8,008.5	21.4	14.0	-90.00	306.0	84.0	818.0	788.5	29.41	27.810	
8,600.0	8,036.0	8,008.5	8,008.5	21.6	14.0	-90.00	306.0	84.0	813.4	783.6	29.71	27.379	
8,664.2	8,036.0	8,008.5	8,008.5	21.9	14.0	-90.00	306.0	84.0	810.8	780.6	30.22	26.835	
8,700.0	8,036.0	8,008.5	8,008.5	22.2	14.0	-90.00	306.0	84.0	811.6	781.1	30.50	26.612	
8,800.0	8,036.0	8,008.5	8,008.5	22.9	14.0	-90.00	306.0	84.0	822.1	790.7	31.43	26.157	
8,900.0	8,036.0	8,008.5	8,008.5	23.7	14.0	-90.00	306.0	84.0	844.4	811.9	32.48	25.997	SF
9,000.0	8,036.0	8,008.5	8,008.5	24.6	14.0	-90.00	306.0	84.0	877.6	844.0	33.63	26.093	
9,100.0	8,036.0	8,008.5	8,008.5	25.6	14.0	-90.00	306.0	84.0	920.5	885.6	34.87	26.399	
9,200.0	8,036.0	8,008.5	8,008.5	26.7	14.0	-90.00	306.0	84.0	971.9	935.7	36.18	26.865	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4B-29H-P168 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.94	0.0	11.2	50.1				
100.0	100.0	84.5	84.5	0.1	0.1	-89.94	0.0	11.2	47.6	47.4	0.25	188.126	
200.0	200.0	184.5	184.5	0.3	0.3	-89.94	0.0	11.2	47.6	47.0	0.60	79.537	
300.0	300.0	284.5	284.5	0.5	0.5	-89.94	0.0	11.2	47.6	46.7	0.95	50.242	CC, ES
400.0	400.0	383.9	383.9	0.6	0.6	-90.36	-0.3	10.7	48.1	46.8	1.30	37.127	
500.0	500.0	483.1	483.1	0.8	0.8	138.52	-1.6	8.8	51.4	49.7	1.65	31.224	
600.0	599.8	582.1	582.0	1.0	1.0	139.61	-3.9	5.5	58.7	56.7	2.00	29.335	SF
700.0	699.5	680.5	680.2	1.2	1.2	141.37	-7.1	0.8	70.1	67.7	2.37	29.626	
800.0	798.7	778.2	777.6	1.5	1.4	143.27	-11.2	-5.3	85.7	82.9	2.75	31.198	
832.4	830.7	809.6	809.0	1.6	1.5	143.85	-12.7	-7.5	91.6	88.7	2.87	31.905	
900.0	897.6	875.1	874.1	1.8	1.6	144.90	-16.2	-12.6	104.7	101.6	3.14	33.357	
1,000.0	996.5	971.5	969.9	2.0	1.9	145.62	-22.1	-21.3	125.3	121.7	3.55	35.309	
1,100.0	1,095.3	1,067.4	1,065.1	2.3	2.1	145.71	-28.8	-31.2	147.0	143.1	3.97	37.055	
1,200.0	1,194.2	1,162.7	1,159.5	2.6	2.4	145.41	-36.4	-42.4	170.0	165.6	4.40	38.635	
1,300.0	1,293.0	1,257.4	1,253.0	2.9	2.7	144.87	-44.9	-54.8	194.2	189.4	4.85	40.083	
1,400.0	1,391.9	1,351.5	1,345.6	3.2	3.0	144.18	-54.1	-68.4	219.7	214.4	5.30	41.449	
1,500.0	1,490.8	1,447.7	1,440.2	3.6	3.3	143.47	-64.0	-83.0	245.9	240.1	5.77	42.639	
1,600.0	1,589.6	1,544.2	1,535.0	3.9	3.6	142.90	-74.0	-97.7	272.1	265.9	6.24	43.635	
1,700.0	1,688.5	1,640.6	1,629.8	4.2	4.0	142.43	-84.0	-112.4	298.4	291.7	6.71	44.480	
1,800.0	1,787.4	1,737.1	1,724.6	4.5	4.3	142.04	-94.0	-127.0	324.7	317.5	7.18	45.205	
1,900.0	1,886.2	1,833.6	1,819.5	4.8	4.7	141.70	-103.9	-141.7	351.0	343.3	7.66	45.834	
2,000.0	1,985.1	1,930.0	1,914.3	5.1	5.0	141.41	-113.9	-156.4	377.3	369.1	8.13	46.384	
2,100.0	2,083.9	2,026.5	2,009.1	5.4	5.4	141.16	-123.9	-171.1	403.6	395.0	8.61	46.869	
2,200.0	2,182.8	2,123.0	2,103.9	5.7	5.7	140.94	-133.9	-185.8	429.9	420.8	9.09	47.300	
2,300.0	2,281.7	2,219.4	2,198.7	6.1	6.0	140.75	-143.9	-200.5	456.2	446.6	9.57	47.686	
2,400.0	2,380.5	2,315.9	2,293.5	6.4	6.4	140.57	-153.8	-215.1	482.5	472.5	10.05	48.032	
2,500.0	2,479.4	2,412.4	2,388.4	6.7	6.7	140.42	-163.8	-229.8	508.8	498.3	10.53	48.345	
2,600.0	2,578.3	2,508.8	2,483.2	7.0	7.1	140.28	-173.8	-244.5	535.2	524.2	11.00	48.629	
2,700.0	2,677.1	2,605.3	2,578.0	7.3	7.4	140.15	-183.8	-259.2	561.5	550.0	11.49	48.888	
2,800.0	2,776.0	2,701.8	2,672.8	7.6	7.8	140.03	-193.8	-273.9	587.8	575.9	11.97	49.125	
2,900.0	2,874.9	2,798.2	2,767.6	7.9	8.2	139.93	-203.7	-288.5	614.2	601.7	12.45	49.343	
3,000.0	2,973.7	2,894.7	2,862.4	8.3	8.5	139.83	-213.7	-303.2	640.5	627.6	12.93	49.544	
3,100.0	3,072.6	2,991.2	2,957.3	8.6	8.9	139.74	-223.7	-317.9	666.8	653.4	13.41	49.730	
3,200.0	3,171.4	3,087.6	3,052.1	8.9	9.2	139.66	-233.7	-332.6	693.2	679.3	13.89	49.902	
3,300.0	3,270.3	3,184.1	3,146.9	9.2	9.6	139.58	-243.6	-347.3	719.5	705.1	14.37	50.062	
3,400.0	3,369.2	3,280.5	3,241.7	9.5	9.9	139.51	-253.6	-361.9	745.8	731.0	14.85	50.212	
3,500.0	3,468.0	3,377.0	3,336.5	9.8	10.3	139.44	-263.6	-376.6	772.2	756.9	15.34	50.351	
3,600.0	3,566.9	3,473.5	3,431.3	10.1	10.6	139.38	-273.6	-391.3	798.5	782.7	15.82	50.482	
3,700.0	3,665.8	3,569.9	3,526.2	10.5	11.0	139.32	-283.6	-406.0	824.9	808.6	16.30	50.605	
3,800.0	3,764.6	3,666.4	3,621.0	10.8	11.3	139.27	-293.5	-420.7	851.2	834.4	16.78	50.720	
3,900.0	3,863.5	3,762.9	3,715.8	11.1	11.7	139.22	-303.5	-435.3	877.6	860.3	17.27	50.829	
4,000.0	3,962.3	3,859.3	3,810.6	11.4	12.0	139.17	-313.5	-450.0	903.9	886.2	17.75	50.932	
4,100.0	4,061.2	3,955.8	3,905.4	11.7	12.4	139.12	-323.5	-464.7	930.3	912.0	18.23	51.028	
4,200.0	4,160.1	4,052.3	4,000.2	12.0	12.7	139.08	-333.5	-479.4	956.6	937.9	18.71	51.120	
4,300.0	4,258.9	4,148.7	4,095.1	12.4	13.1	139.04	-343.4	-494.1	982.9	963.8	19.20	51.207	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4C-29H-P168 - Hz - Plan #4 Ext

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	19.6	39.2				
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	19.6	39.2	39.0	0.25	157.111	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	19.6	39.2	38.6	0.60	65.501	
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	19.6	39.2	38.3	0.95	41.375	
400.0	400.0	400.0	400.0	0.6	0.6	-89.95	0.0	19.6	39.2	37.9	1.30	30.238	CC, ES
500.0	500.0	499.4	499.4	0.8	0.8	139.91	-0.6	19.0	41.2	39.5	1.65	25.031	
600.0	599.8	598.7	598.7	1.0	1.0	141.82	-2.3	17.0	47.2	45.2	2.00	23.596	SF
700.0	699.5	697.5	697.4	1.2	1.2	144.10	-5.0	13.8	57.2	54.8	2.36	24.228	
800.0	798.7	795.7	795.4	1.5	1.4	146.19	-8.9	9.2	71.3	68.6	2.74	26.078	
832.4	830.7	827.4	827.0	1.6	1.4	146.78	-10.4	7.5	76.8	73.9	2.86	26.855	
900.0	897.6	893.3	892.7	1.8	1.6	147.73	-13.8	3.5	88.9	85.7	3.12	28.450	
1,000.0	996.5	990.4	989.4	2.0	1.8	148.16	-19.8	-3.4	107.7	104.1	3.53	30.521	
1,100.0	1,095.3	1,087.1	1,085.5	2.3	2.0	147.89	-26.8	-11.6	127.5	123.6	3.95	32.312	
1,200.0	1,194.2	1,183.4	1,181.0	2.6	2.3	147.20	-34.9	-20.9	148.5	144.1	4.38	33.881	
1,300.0	1,293.0	1,279.9	1,276.4	2.9	2.5	146.28	-43.9	-31.4	170.4	165.6	4.83	35.284	
1,400.0	1,391.9	1,377.3	1,372.8	3.2	2.8	145.50	-53.2	-42.3	192.6	187.4	5.29	36.436	
1,500.0	1,490.8	1,474.8	1,469.3	3.6	3.1	144.87	-62.6	-53.1	214.9	209.1	5.75	37.386	
1,600.0	1,589.6	1,572.3	1,565.7	3.9	3.4	144.36	-71.9	-64.0	237.1	230.9	6.21	38.181	
1,700.0	1,688.5	1,669.8	1,662.1	4.2	3.7	143.94	-81.2	-74.8	259.4	252.7	6.68	38.855	
1,800.0	1,787.4	1,767.2	1,758.5	4.5	4.0	143.59	-90.5	-85.6	281.7	274.6	7.14	39.433	
1,900.0	1,886.2	1,864.7	1,854.9	4.8	4.3	143.29	-99.9	-96.5	304.0	296.4	7.61	39.933	
2,000.0	1,985.1	1,962.2	1,951.3	5.1	4.6	143.03	-109.2	-107.3	326.3	318.2	8.08	40.370	
2,100.0	2,083.9	2,059.6	2,047.8	5.4	4.9	142.80	-118.5	-118.2	348.6	340.1	8.55	40.755	
2,200.0	2,182.8	2,157.1	2,144.2	5.7	5.1	142.60	-127.9	-129.0	370.9	361.9	9.03	41.096	
2,300.0	2,281.7	2,254.6	2,240.6	6.1	5.4	142.43	-137.2	-139.9	393.2	383.7	9.50	41.402	
2,400.0	2,380.5	2,352.1	2,337.0	6.4	5.7	142.27	-146.5	-150.7	415.6	405.6	9.97	41.675	
2,500.0	2,479.4	2,449.5	2,433.4	6.7	6.0	142.13	-155.8	-161.5	437.9	427.4	10.45	41.923	
2,600.0	2,578.3	2,547.0	2,529.8	7.0	6.3	142.00	-165.2	-172.4	460.2	449.3	10.92	42.147	
2,700.0	2,677.1	2,644.5	2,626.3	7.3	6.6	141.88	-174.5	-183.2	482.5	471.1	11.39	42.352	
2,800.0	2,776.0	2,741.9	2,722.7	7.6	6.9	141.78	-183.8	-194.1	504.9	493.0	11.87	42.539	
2,900.0	2,874.9	2,839.4	2,819.1	7.9	7.2	141.68	-193.1	-204.9	527.2	514.8	12.34	42.710	
3,000.0	2,973.7	2,936.9	2,915.5	8.3	7.5	141.59	-202.5	-215.8	549.5	536.7	12.82	42.868	
3,100.0	3,072.6	3,034.4	3,011.9	8.6	7.8	141.51	-211.8	-226.6	571.9	558.6	13.29	43.015	
3,200.0	3,171.4	3,131.8	3,108.3	8.9	8.1	141.43	-221.1	-237.4	594.2	580.4	13.77	43.150	
3,300.0	3,270.3	3,229.3	3,204.8	9.2	8.4	141.36	-230.5	-248.3	616.5	602.3	14.25	43.276	
3,400.0	3,369.2	3,326.8	3,301.2	9.5	8.7	141.29	-239.8	-259.1	638.9	624.1	14.72	43.393	
3,500.0	3,468.0	3,424.2	3,397.6	9.8	9.0	141.23	-249.1	-270.0	661.2	646.0	15.20	43.503	
3,600.0	3,566.9	3,521.7	3,494.0	10.1	9.3	141.18	-258.4	-280.8	683.5	667.9	15.68	43.605	
3,700.0	3,665.8	3,619.2	3,590.4	10.5	9.6	141.12	-267.8	-291.6	705.9	689.7	16.15	43.702	
3,800.0	3,764.6	3,716.7	3,686.8	10.8	9.9	141.07	-277.1	-302.5	728.2	711.6	16.63	43.792	
3,900.0	3,863.5	3,814.1	3,783.3	11.1	10.2	141.03	-286.4	-313.3	750.5	733.4	17.11	43.877	
4,000.0	3,962.3	3,911.6	3,879.7	11.4	10.5	140.98	-295.7	-324.2	772.9	755.3	17.58	43.957	
4,100.0	4,061.2	4,009.1	3,976.1	11.7	10.9	140.94	-305.1	-335.0	795.2	777.2	18.06	44.033	
4,200.0	4,160.1	4,106.5	4,072.5	12.0	11.2	140.90	-314.4	-345.9	817.6	799.0	18.54	44.105	
4,300.0	4,258.9	4,204.0	4,168.9	12.4	11.5	140.86	-323.7	-356.7	839.9	820.9	19.01	44.173	
4,400.0	4,357.8	4,301.5	4,265.3	12.7	11.8	140.83	-333.1	-367.5	862.2	842.7	19.49	44.238	
4,500.0	4,456.7	4,399.0	4,361.8	13.0	12.1	140.79	-342.4	-378.4	884.6	864.6	19.97	44.299	
4,600.0	4,555.5	4,496.4	4,458.2	13.3	12.4	140.76	-351.7	-389.2	906.9	886.5	20.45	44.357	
4,700.0	4,654.4	4,593.9	4,554.6	13.6	12.7	140.73	-361.0	-400.1	929.3	908.3	20.92	44.413	
4,800.0	4,753.3	4,691.4	4,651.0	13.9	13.0	140.70	-370.4	-410.9	951.6	930.2	21.40	44.466	
4,900.0	4,852.1	4,788.8	4,747.4	14.3	13.3	140.67	-379.7	-421.8	973.9	952.1	21.88	44.516	
5,000.0	4,951.0	4,886.3	4,843.8	14.6	13.6	140.64	-389.0	-432.6	996.3	973.9	22.36	44.565	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4D-29H-P168 - Hz - 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
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	30.8	28.0				
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	30.8	28.0	27.8	0.25	112.222	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	30.8	28.0	27.4	0.60	46.786	
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	30.8	28.0	27.1	0.95	29.554	
400.0	400.0	400.0	400.0	0.6	0.6	-89.95	0.0	30.8	28.0	26.7	1.30	21.599	CC, ES
500.0	500.0	500.0	500.0	0.8	0.8	141.35	0.0	30.8	29.4	27.7	1.65	17.828	
600.0	599.8	599.6	599.6	1.0	1.0	145.47	-0.8	30.4	33.9	31.9	2.00	16.965	SF
700.0	699.5	699.1	699.0	1.2	1.2	148.76	-3.1	29.2	42.1	39.7	2.36	17.865	
800.0	798.7	798.1	798.0	1.5	1.4	150.93	-7.0	27.2	53.9	51.1	2.72	19.780	
832.4	830.7	830.1	829.9	1.6	1.4	151.42	-8.6	26.4	58.4	55.6	2.84	20.539	
900.0	897.6	896.8	896.4	1.8	1.5	151.98	-12.4	24.5	68.5	65.4	3.11	22.043	
1,000.0	996.5	995.3	994.7	2.0	1.7	151.60	-19.2	21.0	83.6	80.1	3.51	23.836	
1,100.0	1,095.3	1,093.6	1,092.5	2.3	2.0	150.37	-27.6	16.7	99.3	95.3	3.94	25.225	
1,200.0	1,194.2	1,191.9	1,190.2	2.6	2.2	148.68	-37.5	11.6	115.4	111.0	4.38	26.325	
1,300.0	1,293.0	1,290.5	1,288.1	2.9	2.4	147.20	-47.8	6.3	131.8	126.9	4.85	27.197	
1,400.0	1,391.9	1,389.1	1,386.0	3.2	2.7	146.05	-58.0	1.1	148.2	142.9	5.31	27.897	
1,500.0	1,490.8	1,487.7	1,483.9	3.6	2.9	145.13	-68.3	-4.2	164.7	158.9	5.79	28.468	
1,600.0	1,589.6	1,586.3	1,581.9	3.9	3.2	144.38	-78.6	-9.5	181.2	175.0	6.26	28.940	
1,700.0	1,688.5	1,684.9	1,679.8	4.2	3.4	143.75	-88.9	-14.7	197.8	191.0	6.74	29.337	
1,800.0	1,787.4	1,783.5	1,777.7	4.5	3.7	143.22	-99.2	-20.0	214.3	207.1	7.22	29.675	
1,900.0	1,886.2	1,882.1	1,875.6	4.8	3.9	142.77	-109.5	-25.3	230.9	223.2	7.71	29.965	
2,000.0	1,985.1	1,980.7	1,973.6	5.1	4.2	142.38	-119.7	-30.6	247.5	239.3	8.19	30.217	
2,100.0	2,083.9	2,079.3	2,071.5	5.4	4.5	142.03	-130.0	-35.8	264.1	255.4	8.68	30.438	
2,200.0	2,182.8	2,177.9	2,169.4	5.7	4.7	141.73	-140.3	-41.1	280.7	271.5	9.16	30.633	
2,300.0	2,281.7	2,276.5	2,267.3	6.1	5.0	141.46	-150.6	-46.4	297.3	287.6	9.65	30.806	
2,400.0	2,380.5	2,375.1	2,365.2	6.4	5.2	141.22	-160.9	-51.6	313.9	303.8	10.14	30.961	
2,500.0	2,479.4	2,473.7	2,463.2	6.7	5.5	141.00	-171.2	-56.9	330.5	319.9	10.63	31.100	
2,600.0	2,578.3	2,572.3	2,561.1	7.0	5.8	140.81	-181.4	-62.2	347.2	336.0	11.12	31.226	
2,700.0	2,677.1	2,670.9	2,659.0	7.3	6.0	140.63	-191.7	-67.5	363.8	352.2	11.61	31.340	
2,800.0	2,776.0	2,769.5	2,756.9	7.6	6.3	140.47	-202.0	-72.7	380.4	368.3	12.10	31.444	
2,900.0	2,874.9	2,868.1	2,854.9	7.9	6.5	140.32	-212.3	-78.0	397.1	384.5	12.59	31.539	
3,000.0	2,973.7	2,966.7	2,952.8	8.3	6.8	140.18	-222.6	-83.3	413.7	400.6	13.08	31.626	
3,100.0	3,072.6	3,065.3	3,050.7	8.6	7.1	140.06	-232.9	-88.5	430.3	416.8	13.57	31.707	
3,200.0	3,171.4	3,163.9	3,148.6	8.9	7.3	139.94	-243.1	-93.8	447.0	432.9	14.06	31.781	
3,300.0	3,270.3	3,262.5	3,246.5	9.2	7.6	139.83	-253.4	-99.1	463.6	449.1	14.56	31.851	
3,400.0	3,369.2	3,361.1	3,344.5	9.5	7.9	139.73	-263.7	-104.4	480.3	465.2	15.05	31.915	
3,500.0	3,468.0	3,459.7	3,442.4	9.8	8.1	139.64	-274.0	-109.6	496.9	481.4	15.54	31.975	
3,600.0	3,566.9	3,558.3	3,540.3	10.1	8.4	139.55	-284.3	-114.9	513.6	497.5	16.03	32.031	
3,700.0	3,665.8	3,656.9	3,638.2	10.5	8.6	139.46	-294.6	-120.2	530.2	513.7	16.53	32.083	
3,800.0	3,764.6	3,755.5	3,736.1	10.8	8.9	139.39	-304.8	-125.4	546.9	529.9	17.02	32.132	
3,900.0	3,863.5	3,854.1	3,834.1	11.1	9.2	139.31	-315.1	-130.7	563.5	546.0	17.51	32.178	
4,000.0	3,962.3	3,952.7	3,932.0	11.4	9.4	139.25	-325.4	-136.0	580.2	562.2	18.01	32.222	
4,100.0	4,061.2	4,051.3	4,029.9	11.7	9.7	139.18	-335.7	-141.3	596.8	578.3	18.50	32.263	
4,200.0	4,160.1	4,149.9	4,127.8	12.0	10.0	139.12	-346.0	-146.5	613.5	594.5	18.99	32.301	
4,300.0	4,258.9	4,248.5	4,225.8	12.4	10.2	139.06	-356.3	-151.8	630.1	610.7	19.49	32.338	
4,400.0	4,357.8	4,347.1	4,323.7	12.7	10.5	139.01	-366.5	-157.1	646.8	626.8	19.98	32.373	
4,500.0	4,456.7	4,445.7	4,421.6	13.0	10.8	138.95	-376.8	-162.3	663.4	643.0	20.47	32.406	
4,600.0	4,555.5	4,544.3	4,519.5	13.3	11.0	138.90	-387.1	-167.6	680.1	659.1	20.97	32.437	
4,700.0	4,654.4	4,642.9	4,617.4	13.6	11.3	138.86	-397.4	-172.9	696.8	675.3	21.46	32.467	
4,800.0	4,753.3	4,741.5	4,715.4	13.9	11.5	138.81	-407.7	-178.2	713.4	691.5	21.95	32.495	
4,900.0	4,852.1	4,840.1	4,813.3	14.3	11.8	138.77	-418.0	-183.4	730.1	707.6	22.45	32.522	
5,000.0	4,951.0	4,938.7	4,911.2	14.6	12.1	138.73	-428.3	-188.7	746.7	723.8	22.94	32.548	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4D-29H-P168 - Hz - 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
5,100.0	5,049.8	5,037.3	5,009.1	14.9	12.3	138.69	-438.5	-194.0	763.4	740.0	23.44	32.573	
5,200.0	5,148.7	5,135.9	5,107.1	15.2	12.6	138.65	-448.8	-199.2	780.1	756.1	23.93	32.596	
5,300.0	5,247.6	5,234.5	5,205.0	15.5	12.9	138.61	-459.1	-204.5	796.7	772.3	24.42	32.619	
5,400.0	5,346.4	5,333.1	5,302.9	15.8	13.1	138.58	-469.4	-209.8	813.4	788.5	24.92	32.641	
5,500.0	5,445.3	5,431.7	5,400.8	16.1	13.4	138.55	-479.7	-215.1	830.0	804.6	25.41	32.662	
5,600.0	5,544.2	5,530.3	5,498.7	16.5	13.7	138.51	-490.0	-220.3	846.7	820.8	25.91	32.681	
5,700.0	5,643.0	5,628.9	5,596.7	16.8	13.9	138.48	-500.2	-225.6	863.3	836.9	26.40	32.701	
5,800.0	5,741.9	5,727.6	5,694.6	17.1	14.2	138.45	-510.5	-230.9	880.0	853.1	26.90	32.719	
5,900.0	5,840.7	5,826.2	5,792.5	17.4	14.5	138.43	-520.8	-236.1	896.7	869.3	27.39	32.737	
6,000.0	5,939.6	5,924.8	5,890.4	17.7	14.7	138.40	-531.1	-241.4	913.3	885.4	27.88	32.754	
6,100.0	6,038.5	6,023.4	5,988.4	18.0	15.0	138.37	-541.4	-246.7	930.0	901.6	28.38	32.770	
6,200.0	6,137.3	6,122.0	6,086.3	18.4	15.3	138.35	-551.7	-252.0	946.7	917.8	28.87	32.786	
6,300.0	6,236.2	6,220.6	6,184.2	18.7	15.5	138.32	-561.9	-257.2	963.3	933.9	29.37	32.802	
6,400.0	6,335.1	6,319.2	6,282.1	19.0	15.8	138.30	-572.2	-262.5	980.0	950.1	29.86	32.816	
6,500.0	6,433.9	6,417.8	6,380.0	19.3	16.0	138.27	-582.5	-267.8	996.6	966.3	30.36	32.831	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4E-29H-P168 - Hz - Plan #4 Ext

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	39.2	19.6				
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	39.2	19.6	19.4	0.25	78.555	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	39.2	19.6	19.0	0.60	32.750	
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	39.2	19.6	18.7	0.95	20.688	
400.0	400.0	400.0	400.0	0.6	0.6	-89.95	0.0	39.2	19.6	18.3	1.30	15.119	CC, ES
500.0	500.0	500.0	500.0	0.8	0.8	142.24	0.0	39.2	21.0	19.3	1.65	12.730	
600.0	599.8	599.8	599.8	1.0	1.0	149.47	0.0	39.2	25.3	23.3	2.00	12.669	
700.0	699.5	699.5	699.5	1.2	1.2	157.09	0.0	39.2	33.1	30.8	2.35	14.114	
800.0	798.7	798.7	798.7	1.5	1.3	163.13	0.0	39.2	44.6	41.9	2.69	16.577	
832.4	830.7	830.7	830.7	1.6	1.4	164.69	0.0	39.2	49.1	46.3	2.80	17.536	
900.0	897.6	897.6	897.6	1.8	1.5	167.30	0.0	39.2	59.0	55.9	3.03	19.436	
1,000.0	996.5	996.5	996.5	2.0	1.7	169.87	0.0	39.2	73.7	70.3	3.38	21.809	
1,100.0	1,095.3	1,095.3	1,095.3	2.3	1.9	171.58	0.0	39.2	88.6	84.8	3.73	23.769	
1,200.0	1,194.2	1,194.2	1,194.2	2.6	2.0	172.80	0.0	39.2	103.5	99.4	4.07	25.409	
1,300.0	1,293.0	1,293.0	1,293.0	2.9	2.2	173.71	0.0	39.2	118.4	114.0	4.42	26.800	
1,400.0	1,391.9	1,391.9	1,391.9	3.2	2.4	174.42	0.0	39.2	133.4	128.6	4.76	27.995	
1,500.0	1,490.8	1,490.8	1,490.8	3.6	2.6	174.98	0.0	39.2	148.3	143.2	5.11	29.030	
1,600.0	1,589.6	1,589.6	1,589.6	3.9	2.7	175.44	0.0	39.2	163.3	157.9	5.46	29.936	
1,700.0	1,688.5	1,688.5	1,688.5	4.2	2.9	175.83	0.0	39.2	178.3	172.5	5.80	30.735	
1,800.0	1,787.4	1,787.4	1,787.4	4.5	3.1	176.15	0.0	39.2	193.3	187.2	6.15	31.445	
1,900.0	1,886.2	1,886.2	1,886.2	4.8	3.2	176.43	0.0	39.2	208.3	201.8	6.49	32.081	
2,000.0	1,985.1	1,985.1	1,985.1	5.1	3.4	176.67	0.0	39.2	223.3	216.5	6.84	32.652	
2,100.0	2,083.9	2,087.0	2,087.0	5.4	3.6	176.80	-0.6	39.5	237.8	230.6	7.19	33.066	
2,200.0	2,182.8	2,190.0	2,189.9	5.7	3.8	176.71	-3.0	40.3	250.8	243.2	7.55	33.229	
2,300.0	2,281.7	2,293.2	2,293.1	6.1	4.0	176.41	-7.0	41.9	262.2	254.3	7.90	33.172	
2,400.0	2,380.5	2,396.8	2,396.5	6.4	4.1	175.92	-12.8	44.2	272.1	263.8	8.27	32.923	
2,500.0	2,479.4	2,500.7	2,500.0	6.7	4.3	175.27	-20.4	47.1	280.5	271.9	8.63	32.501	
2,600.0	2,578.3	2,604.7	2,603.6	7.0	4.5	174.45	-29.8	50.7	287.5	278.5	9.00	31.924	
2,700.0	2,677.1	2,708.8	2,707.0	7.3	4.8	173.46	-40.9	55.0	292.9	283.6	9.39	31.207	
2,800.0	2,776.0	2,811.9	2,809.2	7.6	5.0	172.32	-53.5	59.9	297.1	287.3	9.78	30.375	
2,900.0	2,874.9	2,911.7	2,908.0	7.9	5.2	171.18	-66.3	64.9	300.9	290.7	10.18	29.568	
3,000.0	2,973.7	3,011.4	3,006.8	8.3	5.4	170.07	-79.1	69.8	304.8	294.2	10.58	28.809	
3,100.0	3,072.6	3,111.2	3,105.6	8.6	5.7	169.00	-91.8	74.8	308.8	297.8	10.99	28.093	
3,200.0	3,171.4	3,210.9	3,204.5	8.9	5.9	167.94	-104.6	79.7	313.0	301.6	11.41	27.418	
3,300.0	3,270.3	3,310.7	3,303.3	9.2	6.2	166.92	-117.3	84.7	317.2	305.4	11.85	26.779	
3,400.0	3,369.2	3,410.4	3,402.1	9.5	6.4	165.93	-130.1	89.6	321.5	309.3	12.28	26.175	
3,500.0	3,468.0	3,510.2	3,500.9	9.8	6.7	164.96	-142.9	94.6	326.0	313.3	12.73	25.603	
3,600.0	3,566.9	3,609.9	3,599.7	10.1	6.9	164.01	-155.6	99.5	330.5	317.3	13.19	25.061	
3,700.0	3,665.8	3,709.7	3,698.5	10.5	7.2	163.10	-168.4	104.4	335.1	321.5	13.65	24.548	
3,800.0	3,764.6	3,809.4	3,797.3	10.8	7.5	162.20	-181.1	109.4	339.8	325.7	14.12	24.062	
3,900.0	3,863.5	3,909.2	3,896.1	11.1	7.7	161.34	-193.9	114.3	344.6	330.0	14.60	23.600	
4,000.0	3,962.3	4,008.9	3,994.9	11.4	8.0	160.49	-206.7	119.3	349.4	334.4	15.09	23.162	
4,100.0	4,061.2	4,108.7	4,093.7	11.7	8.3	159.67	-219.4	124.2	354.4	338.8	15.58	22.747	
4,200.0	4,160.1	4,208.5	4,192.5	12.0	8.6	158.87	-232.2	129.2	359.4	343.3	16.08	22.352	
4,300.0	4,258.9	4,308.2	4,291.3	12.4	8.8	158.10	-245.0	134.1	364.4	347.9	16.58	21.978	
4,400.0	4,357.8	4,408.0	4,390.2	12.7	9.1	157.34	-257.7	139.1	369.6	352.5	17.09	21.622	
4,500.0	4,456.7	4,507.7	4,489.0	13.0	9.4	156.61	-270.5	144.0	374.8	357.1	17.61	21.283	
4,600.0	4,555.5	4,607.5	4,587.8	13.3	9.7	155.90	-283.2	148.9	380.0	361.9	18.13	20.961	
4,700.0	4,654.4	4,707.2	4,686.6	13.6	9.9	155.20	-296.0	153.9	385.3	366.7	18.65	20.655	
4,800.0	4,753.3	4,807.0	4,785.4	13.9	10.2	154.53	-308.8	158.8	390.7	371.5	19.19	20.364	
4,900.0	4,852.1	4,906.7	4,884.2	14.3	10.5	153.87	-321.5	163.8	396.1	376.4	19.72	20.087	
5,000.0	4,951.0	5,006.5	4,983.0	14.6	10.8	153.23	-334.3	168.7	401.6	381.3	20.26	19.822	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4E-29H-P168 - Hz - Plan #4 Ext

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,049.8	5,106.2	5,081.8	14.9	11.1	152.61	-347.0	173.7	407.1	386.3	20.80	19.571	
5,200.0	5,148.7	5,206.0	5,180.6	15.2	11.3	152.00	-359.8	178.6	412.7	391.3	21.35	19.331	
5,300.0	5,247.6	5,305.7	5,279.4	15.5	11.6	151.41	-372.6	183.6	418.3	396.4	21.90	19.102	
5,400.0	5,346.4	5,405.5	5,378.2	15.8	11.9	150.84	-385.3	188.5	423.9	401.5	22.45	18.883	
5,500.0	5,445.3	5,505.2	5,477.0	16.1	12.2	150.28	-398.1	193.5	429.6	406.6	23.00	18.675	
5,600.0	5,544.2	5,605.0	5,575.8	16.5	12.5	149.74	-410.9	198.4	435.3	411.8	23.56	18.475	
5,700.0	5,643.0	5,704.7	5,674.7	16.8	12.8	149.21	-423.6	203.3	441.1	417.0	24.12	18.285	
5,800.0	5,741.9	5,804.5	5,773.5	17.1	13.1	148.69	-436.4	208.3	446.9	422.2	24.69	18.103	
5,900.0	5,840.7	5,904.2	5,872.3	17.4	13.3	148.19	-449.1	213.2	452.8	427.5	25.25	17.929	
6,000.0	5,939.6	6,004.0	5,971.1	17.7	13.6	147.70	-461.9	218.2	458.6	432.8	25.82	17.762	
6,100.0	6,038.5	6,103.7	6,069.9	18.0	13.9	147.22	-474.7	223.1	464.5	438.1	26.39	17.602	
6,200.0	6,137.3	6,203.5	6,168.7	18.4	14.2	146.76	-487.4	228.1	470.5	443.5	26.96	17.449	
6,300.0	6,236.2	6,303.2	6,267.5	18.7	14.5	146.30	-500.2	233.0	476.4	448.9	27.54	17.303	
6,400.0	6,335.1	6,403.0	6,366.3	19.0	14.8	145.86	-512.9	238.0	482.4	454.3	28.11	17.162	
6,500.0	6,433.9	6,502.7	6,465.1	19.3	15.1	145.43	-525.7	242.9	488.5	459.8	28.69	17.027	
6,600.0	6,532.8	6,602.5	6,563.9	19.6	15.4	145.01	-538.5	247.8	494.5	465.3	29.27	16.898	
6,700.0	6,631.7	6,702.2	6,662.7	19.9	15.6	144.60	-551.2	252.8	500.6	470.8	29.85	16.773	
6,800.0	6,730.5	6,802.0	6,761.5	20.3	15.9	144.19	-564.0	257.7	506.7	476.3	30.43	16.654	
6,900.0	6,829.4	6,901.7	6,860.4	20.6	16.2	143.80	-576.8	262.7	512.8	481.8	31.01	16.539	
6,981.6	6,910.1	6,983.2	6,941.0	20.8	16.5	143.49	-587.2	266.7	517.9	486.4	31.48	16.448	
7,000.0	6,928.3	7,001.5	6,959.2	20.9	16.5	148.31	-589.5	267.6	519.0	487.4	31.58	16.433	
7,100.0	7,027.5	7,100.9	7,057.6	21.1	16.8	-174.33	-602.2	272.5	524.7	492.6	32.14	16.328	
7,200.0	7,126.7	7,199.1	7,154.9	21.2	17.1	-138.88	-614.8	277.4	530.2	497.4	32.77	16.177	
7,300.0	7,225.2	7,295.2	7,250.2	21.3	17.4	-122.39	-626.7	282.2	536.1	502.7	33.42	16.041	
7,400.0	7,322.1	7,392.8	7,347.5	21.3	17.5	-115.30	-629.6	286.7	543.4	509.6	33.77	16.088	
7,500.0	7,416.8	7,494.7	7,448.6	21.2	17.5	-111.74	-618.3	290.9	551.3	517.5	33.76	16.332	
7,600.0	7,508.4	7,600.2	7,550.5	21.1	17.3	-109.54	-591.7	294.6	559.3	525.9	33.38	16.755	
7,700.0	7,596.4	7,708.2	7,649.7	21.0	17.0	-107.74	-549.3	297.7	566.8	534.1	32.70	17.334	
7,800.0	7,680.0	7,817.3	7,742.3	20.8	16.6	-105.91	-491.8	299.9	573.5	541.7	31.81	18.030	
7,900.0	7,758.7	7,926.0	7,824.9	20.7	16.2	-103.85	-421.3	301.2	579.4	548.6	30.84	18.786	
7,989.6	7,824.4	8,021.9	7,888.0	20.6	15.8	-101.73	-349.3	301.5	584.0	554.0	30.03	19.445	
8,000.0	7,831.7	8,032.9	7,894.7	20.6	15.8	-101.41	-340.5	301.5	584.5	554.6	29.95	19.519	
8,050.0	7,865.3	8,085.4	7,924.4	20.6	15.6	-99.95	-297.2	301.4	586.9	557.4	29.57	19.852	
8,100.0	7,896.2	8,137.4	7,950.6	20.5	15.4	-98.58	-252.4	301.0	589.3	560.1	29.26	20.140	
8,150.0	7,924.4	8,188.8	7,973.3	20.5	15.3	-97.30	-206.3	300.4	591.7	562.6	29.05	20.369	
8,200.0	7,949.6	8,239.6	7,992.4	20.5	15.2	-96.10	-159.2	299.6	593.9	565.0	28.93	20.532	
8,250.0	7,971.8	8,289.9	8,008.1	20.6	15.2	-94.96	-111.4	298.7	596.1	567.2	28.91	20.623	
8,300.0	7,990.8	8,339.8	8,020.2	20.6	15.2	-93.89	-63.1	297.5	598.3	569.3	28.99	20.639	
8,350.0	8,006.6	8,389.1	8,028.8	20.7	15.3	-92.88	-14.5	296.2	600.3	571.1	29.16	20.584	
8,400.0	8,019.1	8,437.9	8,034.1	20.8	15.4	-91.94	34.0	294.8	602.2	572.8	29.43	20.461	
8,450.0	8,028.1	8,486.3	8,036.0	21.0	15.5	-91.05	82.3	293.2	604.0	574.3	29.78	20.282	
8,500.0	8,033.7	8,535.8	8,036.0	21.1	15.7	-90.35	131.8	291.5	605.7	575.4	30.24	20.030	
8,550.0	8,035.9	8,585.7	8,036.0	21.3	16.0	-90.02	181.7	289.7	607.0	576.2	30.75	19.742	
8,556.4	8,036.0	8,592.1	8,036.0	21.4	16.0	-90.00	188.0	289.5	607.1	576.3	30.81	19.703	
8,600.0	8,036.0	8,635.7	8,036.0	21.6	16.3	-90.00	231.6	288.0	608.0	576.6	31.39	19.371	
8,700.0	8,036.0	8,735.7	8,036.0	22.2	17.0	-90.00	331.5	284.5	610.2	577.3	32.91	18.540	
8,800.0	8,036.0	8,835.7	8,036.0	22.9	17.8	-90.00	431.5	281.0	612.3	577.6	34.72	17.635	
8,900.0	8,036.0	8,935.7	8,036.0	23.7	18.8	-90.00	531.4	277.5	614.4	577.6	36.78	16.706	
9,000.0	8,036.0	9,035.6	8,036.0	24.6	19.9	-90.00	631.3	274.0	616.5	577.5	39.04	15.792	
9,100.0	8,036.0	9,135.6	8,036.0	25.6	21.0	-90.00	731.2	270.5	618.7	577.2	41.48	14.915	
9,200.0	8,036.0	9,235.6	8,036.0	26.7	22.3	-90.00	831.1	267.0	620.8	576.7	44.06	14.089	
9,300.0	8,036.0	9,335.6	8,036.0	27.8	23.6	-90.00	931.0	263.6	622.9	576.2	46.77	13.320	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4E-29H-P168 - Hz - Plan #4 Ext

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
9,400.0	8,036.0	9,435.5	8,036.0	29.0	24.9	-90.00	1,031.0	260.1	625.1	575.5	49.57	12.609	
9,500.0	8,036.0	9,535.5	8,036.0	30.3	26.4	-90.00	1,130.9	256.6	627.2	574.7	52.46	11.955	
9,600.0	8,036.0	9,635.5	8,036.0	31.6	27.8	-90.00	1,230.8	253.1	629.3	573.9	55.42	11.354	
9,700.0	8,036.0	9,735.5	8,036.0	32.9	29.3	-90.00	1,330.7	249.6	631.4	573.0	58.45	10.804	
9,800.0	8,036.0	9,835.5	8,036.0	34.3	30.8	-90.00	1,430.6	246.1	633.6	572.0	61.52	10.299	
9,900.0	8,036.0	9,935.4	8,036.0	35.7	32.3	-90.00	1,530.5	242.6	635.7	571.1	64.64	9.835	
10,000.0	8,036.0	10,035.4	8,036.0	37.2	33.9	-90.00	1,630.5	239.1	637.8	570.0	67.79	9.408	
10,100.0	8,036.0	10,135.4	8,036.0	38.7	35.5	-90.00	1,730.4	235.6	640.0	569.0	70.98	9.016	
10,200.0	8,036.0	10,235.4	8,036.0	40.1	37.1	-90.00	1,830.3	232.2	642.1	567.9	74.20	8.653	
10,300.0	8,036.0	10,335.3	8,036.0	41.7	38.7	-90.00	1,930.2	228.7	644.2	566.8	77.44	8.318	
10,400.0	8,036.0	10,435.3	8,036.0	43.2	40.3	-90.00	2,030.1	225.2	646.3	565.6	80.71	8.008	
10,500.0	8,036.0	10,535.3	8,036.0	44.7	41.9	-90.00	2,130.0	221.7	648.5	564.5	84.00	7.720	
10,600.0	8,036.0	10,635.3	8,036.0	46.3	43.6	-90.00	2,230.0	218.2	650.6	563.3	87.30	7.453	
10,700.0	8,036.0	10,735.2	8,036.0	47.9	45.2	-90.00	2,329.9	214.7	652.7	562.1	90.62	7.203	
10,800.0	8,036.0	10,835.2	8,036.0	49.5	46.9	-90.00	2,429.8	211.2	654.8	560.9	93.95	6.970	
10,900.0	8,036.0	10,935.2	8,036.0	51.1	48.5	-90.00	2,529.7	207.7	657.0	559.7	97.29	6.753	
11,000.0	8,036.0	11,035.2	8,036.0	52.7	50.2	-90.00	2,629.6	204.2	659.1	558.5	100.65	6.549	
11,100.0	8,036.0	11,135.2	8,036.0	54.3	51.9	-90.00	2,729.5	200.8	661.2	557.2	104.01	6.357	
11,200.0	8,036.0	11,235.1	8,036.0	55.9	53.5	-90.00	2,829.5	197.3	663.4	556.0	107.39	6.177	
11,300.0	8,036.0	11,335.1	8,036.0	57.6	55.2	-90.00	2,929.4	193.8	665.5	554.7	110.77	6.008	
11,400.0	8,036.0	11,435.1	8,036.0	59.2	56.9	-90.00	3,029.3	190.3	667.6	553.5	114.16	5.848	
11,500.0	8,036.0	11,527.8	8,036.0	60.9	58.5	-90.00	3,121.9	186.7	670.1	552.7	117.44	5.706	
11,600.0	8,036.0	11,617.2	8,036.0	62.5	60.0	-90.00	3,211.2	181.9	674.1	553.4	120.66	5.587	
11,700.0	8,036.0	11,713.7	8,036.0	64.2	61.6	-90.00	3,307.5	175.6	679.3	555.3	124.01	5.478	
11,800.0	8,036.0	11,813.5	8,036.0	65.8	63.3	-90.00	3,407.1	169.0	684.6	557.2	127.42	5.373	
11,900.0	8,036.0	11,913.4	8,036.0	67.5	65.0	-90.00	3,506.7	162.3	689.9	559.0	130.84	5.273	
12,000.0	8,036.0	12,013.2	8,036.0	69.2	66.7	-90.00	3,606.4	155.7	695.1	560.9	134.26	5.178	
12,100.0	8,036.0	12,113.1	8,036.0	70.8	68.4	-90.00	3,706.0	149.1	700.4	562.7	137.69	5.087	
12,200.0	8,036.0	12,213.0	8,036.0	72.5	70.2	-90.00	3,805.7	142.4	705.7	564.6	141.12	5.001	
12,300.0	8,036.0	12,312.8	8,036.0	74.2	71.9	-90.00	3,905.3	135.8	711.0	566.4	144.55	4.919	
12,400.0	8,036.0	12,412.7	8,036.0	75.9	73.6	-90.00	4,004.9	129.2	716.3	568.3	147.99	4.840	
12,500.0	8,036.0	12,512.5	8,036.0	77.6	75.3	-90.00	4,104.6	122.5	721.6	570.1	151.43	4.765	
12,600.0	8,036.0	12,612.4	8,036.0	79.3	77.0	-90.00	4,204.2	115.9	726.8	572.0	154.87	4.693	
12,700.0	8,036.0	12,712.3	8,036.0	81.0	78.7	-90.00	4,303.9	109.3	732.1	573.8	158.32	4.624	
12,800.0	8,036.0	12,812.1	8,036.0	82.7	80.4	-90.00	4,403.5	102.7	737.4	575.6	161.77	4.558	
12,900.0	8,036.0	12,912.0	8,036.0	84.4	82.2	-90.00	4,503.1	96.0	742.7	577.5	165.22	4.495	
13,000.0	8,036.0	13,011.8	8,036.0	86.1	83.9	-90.00	4,602.8	89.4	748.0	579.3	168.67	4.434	
13,100.0	8,036.0	13,111.7	8,036.0	87.8	85.6	-90.00	4,702.4	82.8	753.2	581.1	172.13	4.376	
13,200.0	8,036.0	13,211.6	8,036.0	89.5	87.3	-90.00	4,802.1	76.1	758.5	582.9	175.59	4.320	
13,300.0	8,036.0	13,311.4	8,036.0	91.2	89.1	-90.00	4,901.7	69.5	763.8	584.8	179.05	4.266	
13,400.0	8,036.0	13,411.3	8,036.0	92.9	90.8	-90.00	5,001.3	62.9	769.1	586.6	182.51	4.214	
13,500.0	8,036.0	13,511.1	8,036.0	94.6	92.5	-90.00	5,101.0	56.2	774.4	588.4	185.97	4.164	
13,600.0	8,036.0	13,611.0	8,036.0	96.3	94.3	-90.00	5,200.6	49.6	779.6	590.2	189.44	4.116	
13,700.0	8,036.0	13,710.9	8,036.0	98.0	96.0	-90.00	5,300.3	43.0	784.9	592.0	192.90	4.069	
13,800.0	8,036.0	13,810.7	8,036.0	99.8	97.7	-90.00	5,399.9	36.3	790.2	593.8	196.37	4.024	
13,900.0	8,036.0	13,910.6	8,036.0	101.5	99.4	-90.00	5,499.5	29.7	795.5	595.6	199.84	3.981	
14,000.0	8,036.0	14,019.2	8,036.0	103.2	101.3	-90.00	5,608.0	22.8	800.5	597.0	203.46	3.934	
14,100.0	8,036.0	14,135.4	8,036.0	104.9	103.4	-90.00	5,724.1	17.6	803.6	596.4	207.22	3.878	
14,200.0	8,036.0	14,251.8	8,036.0	106.6	105.4	-90.00	5,840.3	14.7	804.8	593.8	210.98	3.815	
14,300.0	8,036.0	14,363.8	8,036.0	108.4	107.3	-90.00	5,952.3	14.0	804.0	589.3	214.66	3.745	
14,400.0	8,036.0	14,463.7	8,036.0	110.1	109.1	-90.00	6,052.3	14.0	802.6	584.5	218.13	3.679	
14,500.0	8,036.0	14,563.7	8,036.0	111.8	110.8	-90.00	6,152.3	14.0	801.2	579.6	221.61	3.616	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4E-29H-P168 - Hz - Plan #4 Ext

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
14,600.0	8,036.0	14,663.7	8,036.0	113.5	112.5	-90.00	6,252.3	14.0	799.9	574.8	225.09	3.554	
14,700.0	8,036.0	14,763.7	8,036.0	115.3	114.3	-90.00	6,352.3	14.0	798.5	570.0	228.56	3.494	
14,800.0	8,036.0	14,863.7	8,036.0	117.0	116.0	-90.00	6,452.3	14.0	797.2	565.1	232.04	3.435	
14,900.0	8,036.0	14,963.7	8,036.0	118.7	117.7	-90.00	6,552.3	14.0	795.8	560.3	235.52	3.379	
15,000.0	8,036.0	15,063.7	8,036.0	120.4	119.5	-90.00	6,652.3	14.0	794.4	555.4	239.00	3.324	
15,100.0	8,036.0	15,163.7	8,036.0	122.2	121.2	-90.00	6,752.2	14.0	793.1	550.6	242.48	3.271	
15,200.0	8,036.0	15,263.7	8,036.0	123.9	123.0	-90.00	6,852.2	14.0	791.7	545.7	245.97	3.219	
15,300.0	8,036.0	15,363.7	8,036.0	125.6	124.7	-90.00	6,952.2	14.0	790.3	540.9	249.45	3.168	
15,400.0	8,036.0	15,463.7	8,036.0	127.4	126.4	-90.00	7,052.2	14.0	789.0	536.1	252.93	3.119	
15,500.0	8,036.0	15,563.6	8,036.0	129.1	128.2	-90.00	7,152.2	14.0	787.6	531.2	256.42	3.072	
15,600.0	8,036.0	15,663.6	8,036.0	130.8	129.9	-90.00	7,252.2	14.0	786.3	526.4	259.90	3.025	
15,700.0	8,036.0	15,763.6	8,036.0	132.6	131.7	-90.00	7,352.2	14.0	784.9	521.5	263.39	2.980	
15,800.0	8,036.0	15,863.6	8,036.0	134.3	133.4	-90.00	7,452.2	14.0	783.5	516.7	266.87	2.936	
15,900.0	8,036.0	15,963.6	8,036.0	136.0	135.2	-90.00	7,552.2	14.0	782.2	511.8	270.36	2.893	
16,000.0	8,036.0	16,063.6	8,036.0	137.8	136.9	-90.00	7,652.2	14.0	780.8	507.0	273.85	2.851	
16,100.0	8,036.0	16,163.6	8,036.0	139.5	138.6	-90.00	7,752.2	14.0	779.4	502.1	277.33	2.810	
16,200.0	8,036.0	16,263.6	8,036.0	141.2	140.4	-90.00	7,852.1	14.0	778.1	497.3	280.82	2.771	
16,300.0	8,036.0	16,363.6	8,036.0	143.0	142.1	-90.00	7,952.1	14.0	776.7	492.4	284.31	2.732	
16,400.0	8,036.0	16,463.6	8,036.0	144.7	143.9	-90.00	8,052.1	14.0	775.4	487.6	287.80	2.694	
16,500.0	8,036.0	16,563.6	8,036.0	146.4	145.6	-90.00	8,152.1	14.0	774.0	482.7	291.29	2.657	
16,600.0	8,036.0	16,663.5	8,036.0	148.2	147.4	-90.00	8,252.1	14.0	772.6	477.9	294.78	2.621	
16,700.0	8,036.0	16,763.5	8,036.0	149.9	149.1	-90.00	8,352.1	14.0	771.3	473.0	298.27	2.586	
16,800.0	8,036.0	16,863.5	8,036.0	151.6	150.8	-90.00	8,452.1	14.0	769.9	468.1	301.76	2.551	
16,900.0	8,036.0	16,963.5	8,036.0	153.4	152.6	-90.00	8,552.1	14.0	768.5	463.3	305.25	2.518	
17,000.0	8,036.0	17,063.5	8,036.0	155.1	154.3	-90.00	8,652.1	14.0	767.2	458.4	308.74	2.485	
17,100.0	8,036.0	17,163.5	8,036.0	156.9	156.1	-90.00	8,752.1	14.0	765.8	453.6	312.23	2.453	
17,200.0	8,036.0	17,263.5	8,036.0	158.6	157.8	-90.00	8,852.1	14.0	764.5	448.7	315.73	2.421	
17,300.0	8,036.0	17,363.5	8,036.0	160.3	159.6	-90.00	8,952.0	14.0	763.1	443.9	319.22	2.391	
17,400.0	8,036.0	17,463.5	8,036.0	162.1	161.3	-90.00	9,052.0	14.0	761.7	439.0	322.71	2.360	
17,500.0	8,036.0	17,563.5	8,036.0	163.8	163.1	-90.00	9,152.0	14.0	760.4	434.2	326.21	2.331	
17,600.0	8,036.0	17,663.4	8,036.0	165.6	164.8	-90.00	9,252.0	14.0	759.0	429.3	329.70	2.302	
17,700.0	8,036.0	17,763.4	8,036.0	167.3	166.6	-90.00	9,352.0	14.0	757.6	424.5	333.19	2.274	
17,800.0	8,036.0	17,863.4	8,036.0	169.0	168.3	-90.00	9,452.0	14.0	756.3	419.6	336.69	2.246	
17,822.0	8,036.0	17,875.1	8,036.0	169.4	168.5	-90.00	9,463.7	14.0	756.1	418.8	337.28	2.242	
17,826.5	8,036.0	17,875.1	8,036.0	169.5	168.5	-90.00	9,463.7	14.0	756.1	418.7	337.35	2.241	
17,827.1	8,036.0	17,875.1	8,036.0	169.5	168.5	-90.00	9,463.7	14.0	756.1	418.7	337.37	2.241	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4F-29H-P168 - Hz - 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
0.0	0.0	0.0	0.0	0.0	0.0	-89.94	0.0	50.4	8.4				
100.0	100.0	100.0	100.0	0.1	0.1	-89.94	0.0	50.4	8.4	8.2	0.25	33.667	
200.0	200.0	200.0	200.0	0.3	0.3	-89.94	0.0	50.4	8.4	7.8	0.60	14.036	
300.0	300.0	300.0	300.0	0.5	0.5	-89.94	0.0	50.4	8.4	7.5	0.95	8.866	
400.0	400.0	400.0	400.0	0.6	0.6	-89.94	0.0	50.4	8.4	7.1	1.30	6.480	CC, ES
500.0	500.0	500.0	500.0	0.8	0.8	145.82	0.0	50.4	9.8	8.1	1.65	5.947	
600.0	599.8	600.0	600.0	1.0	1.0	155.28	-0.8	50.9	13.8	11.8	2.00	6.892	
700.0	699.5	700.1	700.0	1.2	1.2	160.82	-3.0	52.3	19.8	17.5	2.35	8.443	
800.0	798.7	800.1	799.9	1.5	1.4	163.81	-6.7	54.6	27.8	25.1	2.70	10.322	
832.4	830.7	832.4	832.3	1.6	1.4	164.44	-8.2	55.6	30.8	28.0	2.81	10.974	
900.0	897.6	900.1	899.8	1.8	1.6	165.13	-11.8	57.9	37.0	33.9	3.05	12.117	
1,000.0	996.5	1,000.4	999.8	2.0	1.8	164.85	-18.4	62.2	44.9	41.4	3.42	13.112	
1,100.0	1,095.3	1,100.9	1,099.8	2.3	2.0	163.61	-26.6	67.4	51.3	47.5	3.80	13.477	
1,200.0	1,194.2	1,201.6	1,199.8	2.6	2.2	161.65	-36.2	73.5	56.2	52.0	4.20	13.370	
1,300.0	1,293.0	1,301.6	1,299.0	2.9	2.5	159.42	-46.6	80.2	60.4	55.7	4.62	13.053	
1,400.0	1,391.9	1,401.5	1,398.2	3.2	2.7	157.47	-57.1	86.9	64.6	59.5	5.06	12.769	
1,500.0	1,490.8	1,501.3	1,497.3	3.6	3.0	155.76	-67.6	93.6	68.9	63.4	5.50	12.514	
1,600.0	1,589.6	1,601.2	1,596.4	3.9	3.2	154.25	-78.0	100.3	73.2	67.2	5.96	12.286	
1,700.0	1,688.5	1,701.1	1,695.5	4.2	3.5	152.91	-88.5	107.0	77.6	71.2	6.42	12.081	
1,800.0	1,787.4	1,801.0	1,794.6	4.5	3.8	151.71	-98.9	113.6	82.0	75.1	6.89	11.896	
1,900.0	1,886.2	1,900.9	1,893.7	4.8	4.0	150.64	-109.4	120.3	86.5	79.1	7.37	11.729	
2,000.0	1,985.1	2,000.8	1,992.8	5.1	4.3	149.67	-119.8	127.0	90.9	83.1	7.85	11.578	
2,100.0	2,083.9	2,100.7	2,092.0	5.4	4.6	148.80	-130.3	133.7	95.4	87.1	8.34	11.441	
2,200.0	2,182.8	2,200.6	2,191.1	5.7	4.9	148.00	-140.8	140.4	100.0	91.1	8.83	11.316	
2,300.0	2,281.7	2,300.4	2,290.2	6.1	5.1	147.27	-151.2	147.1	104.5	95.2	9.33	11.202	
2,400.0	2,380.5	2,400.3	2,389.3	6.4	5.4	146.60	-161.7	153.7	109.1	99.2	9.83	11.098	
2,500.0	2,479.4	2,500.2	2,488.4	6.7	5.7	145.99	-172.1	160.4	113.6	103.3	10.33	11.002	
2,600.0	2,578.3	2,600.1	2,587.5	7.0	5.9	145.42	-182.6	167.1	118.2	107.4	10.83	10.914	
2,700.0	2,677.1	2,700.0	2,686.6	7.3	6.2	144.90	-193.0	173.8	122.8	111.5	11.34	10.833	
2,800.0	2,776.0	2,799.9	2,785.8	7.6	6.5	144.41	-203.5	180.5	127.4	115.6	11.84	10.758	
2,900.0	2,874.9	2,899.8	2,884.9	7.9	6.8	143.96	-214.0	187.2	132.0	119.7	12.35	10.689	
3,000.0	2,973.7	2,999.7	2,984.0	8.3	7.0	143.54	-224.4	193.9	136.6	123.8	12.86	10.624	
3,100.0	3,072.6	3,099.6	3,083.1	8.6	7.3	143.15	-234.9	200.5	141.3	127.9	13.37	10.564	
3,200.0	3,171.4	3,199.4	3,182.2	8.9	7.6	142.78	-245.3	207.2	145.9	132.0	13.88	10.508	
3,300.0	3,270.3	3,299.3	3,281.3	9.2	7.9	142.43	-255.8	213.9	150.5	136.1	14.40	10.456	
3,400.0	3,369.2	3,399.2	3,380.4	9.5	8.1	142.10	-266.3	220.6	155.2	140.3	14.91	10.407	
3,500.0	3,468.0	3,499.1	3,479.6	9.8	8.4	141.80	-276.7	227.3	159.8	144.4	15.43	10.361	
3,600.0	3,566.9	3,599.0	3,578.7	10.1	8.7	141.51	-287.2	234.0	164.5	148.5	15.94	10.318	
3,700.0	3,665.8	3,698.9	3,677.8	10.5	9.0	141.23	-297.6	240.7	169.1	152.7	16.46	10.277	
3,800.0	3,764.6	3,798.8	3,776.9	10.8	9.3	140.98	-308.1	247.3	173.8	156.8	16.97	10.239	
3,900.0	3,863.5	3,898.7	3,876.0	11.1	9.5	140.73	-318.5	254.0	178.5	161.0	17.49	10.202	
4,000.0	3,962.3	3,998.6	3,975.1	11.4	9.8	140.50	-329.0	260.7	183.1	165.1	18.01	10.168	
4,100.0	4,061.2	4,098.4	4,074.2	11.7	10.1	140.28	-339.5	267.4	187.8	169.3	18.53	10.136	
4,200.0	4,160.1	4,198.3	4,173.4	12.0	10.4	140.07	-349.9	274.1	192.5	173.4	19.05	10.105	
4,300.0	4,258.9	4,298.2	4,272.5	12.4	10.6	139.87	-360.4	280.8	197.1	177.6	19.57	10.076	
4,400.0	4,357.8	4,398.1	4,371.6	12.7	10.9	139.67	-370.8	287.5	201.8	181.7	20.08	10.048	
4,500.0	4,456.7	4,498.0	4,470.7	13.0	11.2	139.49	-381.3	294.1	206.5	185.9	20.60	10.022	
4,600.0	4,555.5	4,597.9	4,569.8	13.3	11.5	139.32	-391.8	300.8	211.2	190.0	21.12	9.996	
4,700.0	4,654.4	4,697.8	4,668.9	13.6	11.7	139.15	-402.2	307.5	215.9	194.2	21.64	9.972	
4,800.0	4,753.3	4,797.7	4,768.0	13.9	12.0	138.99	-412.7	314.2	220.5	198.4	22.17	9.949	
4,900.0	4,852.1	4,897.5	4,867.1	14.3	12.3	138.84	-423.1	320.9	225.2	202.5	22.69	9.928	
5,000.0	4,951.0	4,997.4	4,966.3	14.6	12.6	138.69	-433.6	327.6	229.9	206.7	23.21	9.907	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4F-29H-P168 - Hz - 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
5,100.0	5,049.8	5,097.3	5,065.4	14.9	12.9	138.55	-444.0	334.3	234.6	210.9	23.73	9.887	
5,200.0	5,148.7	5,197.2	5,164.5	15.2	13.1	138.41	-454.5	340.9	239.3	215.0	24.25	9.867	
5,300.0	5,247.6	5,297.1	5,263.6	15.5	13.4	138.28	-465.0	347.6	244.0	219.2	24.77	9.849	
5,400.0	5,346.4	5,397.0	5,362.7	15.8	13.7	138.16	-475.4	354.3	248.7	223.4	25.29	9.831	
5,500.0	5,445.3	5,496.9	5,461.8	16.1	14.0	138.04	-485.9	361.0	253.4	227.5	25.82	9.814	
5,600.0	5,544.2	5,596.8	5,560.9	16.5	14.2	137.92	-496.3	367.7	258.1	231.7	26.34	9.798	
5,700.0	5,643.0	5,696.7	5,660.1	16.8	14.5	137.81	-506.8	374.4	262.8	235.9	26.86	9.782	
5,800.0	5,741.9	5,796.5	5,759.2	17.1	14.8	137.70	-517.2	381.1	267.4	240.1	27.38	9.767	
5,900.0	5,840.7	5,896.4	5,858.3	17.4	15.1	137.60	-527.7	387.7	272.1	244.2	27.91	9.752	
6,000.0	5,939.6	5,996.3	5,957.4	17.7	15.4	137.49	-538.2	394.4	276.8	248.4	28.43	9.738	
6,100.0	6,038.5	6,096.2	6,056.5	18.0	15.6	137.40	-548.6	401.1	281.5	252.6	28.95	9.725	
6,200.0	6,137.3	6,196.1	6,155.6	18.4	15.9	137.30	-559.1	407.8	286.2	256.8	29.47	9.712	
6,300.0	6,236.2	6,296.0	6,254.7	18.7	16.2	137.21	-569.5	414.5	290.9	260.9	30.00	9.699	
6,400.0	6,335.1	6,395.9	6,353.9	19.0	16.5	137.12	-580.0	421.2	295.6	265.1	30.52	9.687	
6,500.0	6,433.9	6,495.8	6,453.0	19.3	16.7	137.04	-590.5	427.9	300.3	269.3	31.04	9.675	
6,600.0	6,532.8	6,595.6	6,552.1	19.6	17.0	136.95	-600.9	434.5	305.0	273.5	31.57	9.664	
6,700.0	6,631.7	6,695.5	6,651.2	19.9	17.3	136.87	-611.4	441.2	309.8	277.7	32.09	9.652	
6,800.0	6,730.5	6,795.4	6,750.3	20.3	17.6	136.80	-621.8	447.9	314.5	281.8	32.61	9.642	
6,900.0	6,829.4	6,895.2	6,849.5	20.6	17.8	136.99	-630.8	454.5	319.2	286.1	33.04	9.661	
6,981.6	6,910.1	6,975.5	6,929.5	20.8	17.9	138.64	-629.5	459.5	323.2	290.3	32.91	9.820	
7,000.0	6,928.3	6,993.2	6,947.2	20.9	17.9	144.09	-628.0	460.6	324.2	291.4	32.82	9.880	
7,100.0	7,027.5	7,087.8	7,040.3	21.1	17.9	-174.20	-612.7	465.7	330.6	298.6	32.00	10.332	
7,200.0	7,126.7	7,178.7	7,127.2	21.2	17.7	-133.04	-586.6	470.1	339.1	308.2	30.89	10.976	
7,300.0	7,225.2	7,265.7	7,206.7	21.3	17.5	-109.80	-551.5	473.5	350.2	320.5	29.67	11.804	
7,400.0	7,322.1	7,350.0	7,279.1	21.3	17.2	-95.96	-508.5	476.2	364.3	335.8	28.47	12.796	
7,500.0	7,416.8	7,428.0	7,341.2	21.2	16.9	-86.31	-461.4	478.0	381.5	354.0	27.48	13.883	
7,600.0	7,508.4	7,500.0	7,393.7	21.1	16.6	-78.86	-412.2	479.2	401.8	375.1	26.76	15.019	
7,700.0	7,596.4	7,575.8	7,443.3	21.0	16.3	-72.36	-355.0	479.8	425.0	398.7	26.26	16.184	
7,800.0	7,680.0	7,650.0	7,485.8	20.8	16.0	-66.73	-294.2	479.8	450.6	424.6	26.00	17.333	
7,900.0	7,758.7	7,711.1	7,516.0	20.7	15.9	-62.18	-241.1	479.4	478.2	452.3	25.91	18.456	
7,989.6	7,824.4	7,768.2	7,540.0	20.6	15.7	-58.42	-189.3	478.7	504.3	478.4	25.89	19.477	
8,000.0	7,831.7	7,774.8	7,542.5	20.6	15.7	-57.89	-183.2	478.6	507.4	481.5	25.86	19.622	
8,050.0	7,865.3	7,800.0	7,551.5	20.6	15.7	-55.71	-159.7	478.1	521.9	496.3	25.66	20.341	
8,100.0	7,896.2	7,837.0	7,563.3	20.5	15.7	-53.50	-124.6	477.3	535.7	510.3	25.47	21.036	
8,150.0	7,924.4	7,867.8	7,571.7	20.5	15.6	-51.70	-95.0	476.5	548.9	523.6	25.23	21.750	
8,200.0	7,949.6	7,900.0	7,579.2	20.5	15.6	-50.11	-63.7	475.6	561.2	536.2	24.97	22.470	
8,250.0	7,971.8	7,929.0	7,584.7	20.6	15.7	-48.77	-35.2	474.7	572.6	547.8	24.75	23.137	
8,300.0	7,990.8	7,959.4	7,589.2	20.6	15.7	-47.59	-5.2	473.7	583.0	558.6	24.46	23.839	
8,350.0	8,006.6	7,989.8	7,592.4	20.7	15.8	-46.59	25.0	472.6	592.5	568.3	24.23	24.455	
8,400.0	8,019.1	8,020.0	7,594.3	20.8	15.8	-45.76	55.1	471.4	600.9	576.9	24.04	24.995	
8,450.0	8,028.1	8,051.0	7,595.0	21.0	15.9	-45.06	86.1	470.1	608.3	584.4	23.90	25.449	
8,500.0	8,033.7	8,099.2	7,595.0	21.1	16.1	-44.52	134.2	468.0	613.8	589.9	23.90	25.679	
8,550.0	8,035.9	8,149.1	7,595.0	21.3	16.3	-44.34	184.1	465.8	616.5	592.5	24.04	25.649	
8,556.4	8,036.0	8,155.4	7,595.0	21.4	16.4	-44.34	190.4	465.5	616.7	592.6	24.06	25.629	
8,600.0	8,036.0	8,199.0	7,595.0	21.6	16.6	-44.43	234.0	463.6	617.6	593.1	24.51	25.196	
8,700.0	8,036.0	8,299.0	7,595.0	22.2	17.3	-44.63	333.8	459.3	619.7	594.0	25.72	24.094	
8,800.0	8,036.0	8,399.0	7,595.0	22.9	18.1	-44.82	433.7	454.9	621.8	594.7	27.11	22.935	
8,900.0	8,036.0	8,498.9	7,595.0	23.7	19.0	-45.02	533.6	450.6	623.9	595.3	28.67	21.765	
9,000.0	8,036.0	8,598.9	7,595.0	24.6	20.1	-45.21	633.4	446.2	626.1	595.7	30.36	20.619	
9,100.0	8,036.0	8,698.8	7,595.0	25.6	21.2	-45.40	733.3	441.8	628.2	596.0	32.18	19.520	
9,200.0	8,036.0	8,798.8	7,595.0	26.7	22.4	-45.60	833.1	437.5	630.3	596.2	34.11	18.482	
9,300.0	8,036.0	8,898.7	7,595.0	27.8	23.7	-45.79	933.0	433.1	632.5	596.4	36.12	17.509	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4F-29H-P168 - Hz - 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
9,400.0	8,036.0	8,998.7	7,595.0	29.0	25.1	-45.97	1,032.9	428.8	634.6	596.4	38.22	16.604	
9,500.0	8,036.0	9,098.6	7,595.0	30.3	26.5	-46.16	1,132.7	424.4	636.8	596.4	40.39	15.766	
9,600.0	8,036.0	9,198.6	7,595.0	31.6	27.9	-46.35	1,232.6	420.0	639.0	596.3	42.62	14.992	
9,700.0	8,036.0	9,298.6	7,595.0	32.9	29.4	-46.53	1,332.4	415.7	641.1	596.2	44.91	14.276	
9,800.0	8,036.0	9,398.5	7,595.0	34.3	30.9	-46.72	1,432.3	411.3	643.3	596.1	47.25	13.616	
9,900.0	8,036.0	9,498.5	7,595.0	35.7	32.4	-46.90	1,532.2	407.0	645.5	595.9	49.63	13.007	
10,000.0	8,036.0	9,598.4	7,595.0	37.2	33.9	-47.08	1,632.0	402.6	647.7	595.7	52.05	12.443	
10,100.0	8,036.0	9,698.4	7,595.0	38.7	35.5	-47.26	1,731.9	398.2	649.9	595.4	54.51	11.922	
10,200.0	8,036.0	9,798.3	7,595.0	40.1	37.1	-47.44	1,831.7	393.9	652.1	595.1	57.01	11.439	
10,300.0	8,036.0	9,898.3	7,595.0	41.7	38.7	-47.62	1,931.6	389.5	654.3	594.8	59.53	10.991	
10,400.0	8,036.0	9,998.2	7,595.0	43.2	40.3	-47.79	2,031.5	385.2	656.5	594.5	62.09	10.574	
10,500.0	8,036.0	10,098.2	7,595.0	44.7	41.9	-47.97	2,131.3	380.8	658.8	594.1	64.67	10.186	
10,600.0	8,036.0	10,198.1	7,595.0	46.3	43.5	-48.14	2,231.2	376.4	661.0	593.7	67.28	9.825	
10,700.0	8,036.0	10,298.1	7,595.0	47.9	45.2	-48.32	2,331.0	372.1	663.2	593.3	69.91	9.487	
10,800.0	8,036.0	10,398.1	7,595.0	49.5	46.8	-48.49	2,430.9	367.7	665.5	592.9	72.57	9.171	
10,900.0	8,036.0	10,498.0	7,595.0	51.1	48.5	-48.66	2,530.8	363.4	667.7	592.5	75.24	8.874	
11,000.0	8,036.0	10,598.0	7,595.0	52.7	50.2	-48.83	2,630.6	359.0	670.0	592.1	77.94	8.596	
11,100.0	8,036.0	10,697.9	7,595.0	54.3	51.8	-49.00	2,730.5	354.6	672.3	591.6	80.65	8.335	
11,200.0	8,036.0	10,797.9	7,595.0	55.9	53.5	-49.16	2,830.3	350.3	674.5	591.1	83.39	8.089	
11,300.0	8,036.0	10,897.8	7,595.0	57.6	55.2	-49.33	2,930.2	345.9	676.8	590.7	86.14	7.857	
11,400.0	8,036.0	10,997.8	7,595.0	59.2	56.9	-49.49	3,030.1	341.6	679.1	590.2	88.91	7.638	
11,500.0	8,036.0	11,097.7	7,595.0	60.9	58.6	-49.66	3,129.9	337.2	681.4	589.7	91.70	7.431	
11,600.0	8,036.0	11,197.7	7,595.0	62.5	60.2	-49.82	3,229.8	332.8	683.7	589.2	94.50	7.235	
11,700.0	8,036.0	11,297.7	7,595.0	64.2	61.9	-49.98	3,329.6	328.5	686.0	588.6	97.31	7.049	
11,800.0	8,036.0	11,397.6	7,595.0	65.8	63.6	-50.14	3,429.5	324.1	688.3	588.1	100.14	6.873	
11,900.0	8,036.0	11,497.6	7,595.0	67.5	65.3	-50.30	3,529.4	319.8	690.6	587.6	102.99	6.705	
12,000.0	8,036.0	11,597.5	7,595.0	69.2	67.1	-50.46	3,629.2	315.4	692.9	587.0	105.85	6.546	
12,100.0	8,036.0	11,697.5	7,595.0	70.8	68.8	-50.62	3,729.1	311.0	695.2	586.5	108.72	6.394	
12,200.0	8,036.0	11,797.4	7,595.0	72.5	70.5	-50.77	3,828.9	306.7	697.5	585.9	111.60	6.250	
12,300.0	8,036.0	11,897.4	7,595.0	74.2	72.2	-50.93	3,928.8	302.3	699.8	585.3	114.50	6.112	
12,400.0	8,036.0	12,003.3	7,595.0	75.9	74.0	-51.08	4,034.6	298.0	701.9	584.5	117.48	5.975	
12,500.0	8,036.0	12,113.8	7,595.0	77.6	75.9	-51.13	4,145.1	295.5	702.7	582.3	120.39	5.837	
12,600.0	8,036.0	12,224.4	7,595.0	79.3	77.8	-51.07	4,255.7	295.1	701.9	578.8	123.13	5.700	
12,700.0	8,036.0	12,329.4	7,595.0	81.0	79.6	-50.93	4,360.7	296.4	699.9	574.2	125.66	5.569	
12,800.0	8,036.0	12,429.3	7,595.0	82.7	81.3	-50.78	4,460.6	297.9	697.6	569.5	128.10	5.446	
12,900.0	8,036.0	12,529.3	7,595.0	84.4	83.1	-50.63	4,560.6	299.4	695.4	564.9	130.53	5.328	
13,000.0	8,036.0	12,629.2	7,595.0	86.1	84.8	-50.48	4,660.5	300.9	693.2	560.3	132.94	5.214	
13,100.0	8,036.0	12,729.2	7,595.0	87.8	86.5	-50.33	4,760.4	302.4	691.0	555.6	135.35	5.105	
13,200.0	8,036.0	12,829.2	7,595.0	89.5	88.3	-50.18	4,860.4	303.9	688.8	551.0	137.74	5.001	
13,300.0	8,036.0	12,929.1	7,595.0	91.2	90.0	-50.03	4,960.3	305.4	686.6	546.5	140.12	4.900	
13,400.0	8,036.0	13,029.1	7,595.0	92.9	91.7	-49.87	5,060.3	306.9	684.4	541.9	142.48	4.803	
13,500.0	8,036.0	13,129.0	7,595.0	94.6	93.5	-49.72	5,160.2	308.4	682.2	537.4	144.83	4.710	
13,600.0	8,036.0	13,229.0	7,595.0	96.3	95.2	-49.56	5,260.2	309.9	680.0	532.8	147.17	4.620	
13,700.0	8,036.0	13,329.0	7,595.0	98.0	96.9	-49.40	5,360.1	311.5	677.8	528.3	149.50	4.534	
13,800.0	8,036.0	13,428.9	7,595.0	99.8	98.7	-49.24	5,460.1	313.0	675.6	523.8	151.81	4.451	
13,900.0	8,036.0	13,528.9	7,595.0	101.5	100.4	-49.09	5,560.0	314.5	673.5	519.4	154.10	4.370	
14,000.0	8,036.0	13,628.8	7,595.0	103.2	102.1	-48.93	5,660.0	316.0	671.3	514.9	156.38	4.293	
14,100.0	8,036.0	13,728.8	7,595.0	104.9	103.9	-48.76	5,759.9	317.5	669.2	510.5	158.65	4.218	
14,200.0	8,036.0	13,828.7	7,595.0	106.6	105.6	-48.60	5,859.9	319.0	667.0	506.1	160.90	4.145	
14,300.0	8,036.0	13,928.7	7,595.0	108.4	107.3	-48.44	5,959.8	320.5	664.9	501.7	163.13	4.075	
14,400.0	8,036.0	14,028.7	7,595.0	110.1	109.1	-48.27	6,059.8	322.0	662.7	497.4	165.35	4.008	
14,500.0	8,036.0	14,128.6	7,595.0	111.8	110.8	-48.11	6,159.7	323.5	660.6	493.0	167.56	3.942	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Pratt 4F-29H-P168 - Hz - 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
14,600.0	8,036.0	14,228.6	7,595.0	113.5	112.6	-47.94	6,259.7	325.0	658.4	488.7	169.74	3.879	
14,700.0	8,036.0	14,328.5	7,595.0	115.3	114.3	-47.77	6,359.6	326.5	656.3	484.4	171.91	3.818	
14,800.0	8,036.0	14,428.5	7,595.0	117.0	116.0	-47.60	6,459.6	328.0	654.2	480.1	174.07	3.758	
14,900.0	8,036.0	14,528.5	7,595.0	118.7	117.8	-47.43	6,559.5	329.5	652.1	475.9	176.20	3.701	
15,000.0	8,036.0	14,628.4	7,595.0	120.4	119.5	-47.26	6,659.4	331.0	650.0	471.6	178.32	3.645	
15,100.0	8,036.0	14,728.4	7,595.0	122.2	121.3	-47.09	6,759.4	332.5	647.9	467.4	180.42	3.591	
15,200.0	8,036.0	14,828.3	7,595.0	123.9	123.0	-46.92	6,859.3	334.0	645.8	463.3	182.50	3.538	
15,300.0	8,036.0	14,928.3	7,595.0	125.6	124.7	-46.74	6,959.3	335.5	643.7	459.1	184.57	3.487	
15,400.0	8,036.0	15,028.3	7,595.0	127.4	126.5	-46.57	7,059.2	337.1	641.6	455.0	186.61	3.438	
15,500.0	8,036.0	15,128.2	7,595.0	129.1	128.2	-46.39	7,159.2	338.6	639.5	450.9	188.64	3.390	
15,600.0	8,036.0	15,228.2	7,595.0	130.8	130.0	-46.21	7,259.1	340.1	637.4	446.8	190.65	3.343	
15,700.0	8,036.0	15,328.1	7,595.0	132.6	131.7	-46.03	7,359.1	341.6	635.4	442.7	192.64	3.298	
15,800.0	8,036.0	15,428.1	7,595.0	134.3	133.5	-45.85	7,459.0	343.1	633.3	438.7	194.61	3.254	
15,900.0	8,036.0	15,528.0	7,595.0	136.0	135.2	-45.67	7,559.0	344.6	631.2	434.7	196.56	3.212	
16,000.0	8,036.0	15,628.0	7,595.0	137.8	136.9	-45.49	7,658.9	346.1	629.2	430.7	198.49	3.170	
16,100.0	8,036.0	15,728.0	7,595.0	139.5	138.7	-45.31	7,758.9	347.6	627.2	426.8	200.39	3.130	
16,200.0	8,036.0	15,827.9	7,595.0	141.2	140.4	-45.12	7,858.8	349.1	625.1	422.8	202.28	3.090	
16,300.0	8,036.0	15,927.9	7,595.0	143.0	142.2	-44.94	7,958.8	350.6	623.1	418.9	204.15	3.052	
16,400.0	8,036.0	16,027.8	7,595.0	144.7	143.9	-44.75	8,058.7	352.1	621.1	415.1	205.99	3.015	
16,500.0	8,036.0	16,127.8	7,595.0	146.4	145.7	-44.56	8,158.7	353.6	619.0	411.2	207.82	2.979	
16,600.0	8,036.0	16,227.8	7,595.0	148.2	147.4	-44.37	8,258.6	355.1	617.0	407.4	209.62	2.944	
16,700.0	8,036.0	16,327.7	7,595.0	149.9	149.2	-44.18	8,358.6	356.6	615.0	403.6	211.40	2.909	
16,800.0	8,036.0	16,427.7	7,595.0	151.6	150.9	-43.99	8,458.5	358.1	613.0	399.9	213.15	2.876	
16,900.0	8,036.0	16,527.6	7,595.0	153.4	152.6	-43.79	8,558.5	359.6	611.1	396.2	214.89	2.844	
17,000.0	8,036.0	16,627.6	7,595.0	155.1	154.4	-43.60	8,658.4	361.1	609.1	392.5	216.60	2.812	
17,100.0	8,036.0	16,727.6	7,595.0	156.9	156.1	-43.40	8,758.3	362.6	607.1	388.8	218.28	2.781	
17,200.0	8,036.0	16,827.5	7,595.0	158.6	157.9	-43.21	8,858.3	364.2	605.1	385.2	219.94	2.751	
17,300.0	8,036.0	16,927.5	7,595.0	160.3	159.6	-43.01	8,958.2	365.7	603.2	381.6	221.58	2.722	
17,387.1	8,036.0	17,003.3	7,595.0	161.9	161.0	-42.86	9,034.1	366.8	601.6	378.6	222.94	2.698	
17,400.0	8,036.0	17,003.3	7,595.0	162.1	161.0	-42.86	9,034.1	366.8	601.7	378.6	223.10	2.697	SF
17,500.0	8,036.0	17,003.3	7,595.0	163.8	161.0	-42.86	9,034.1	366.8	612.0	387.7	224.29	2.728	
17,600.0	8,036.0	17,003.3	7,595.0	165.6	161.0	-42.86	9,034.1	366.8	638.0	412.5	225.49	2.829	
17,700.0	8,036.0	17,003.3	7,595.0	167.3	161.0	-42.86	9,034.1	366.8	677.9	451.2	226.69	2.990	
17,800.0	8,036.0	17,003.3	7,595.0	169.0	161.0	-42.86	9,034.1	366.8	729.4	501.5	227.88	3.201	
17,826.5	8,036.0	17,003.3	7,595.0	169.5	161.0	-42.86	9,034.1	366.8	744.7	516.5	228.20	3.263	
17,827.1	8,036.0	17,003.3	7,595.0	169.5	161.0	-42.86	9,034.1	366.8	745.0	516.8	228.21	3.265	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SUR

Offset Site Error: 0.0 ft

Survey Program: 218-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	-5.04	328.3	29.9	329.8				
100.0	100.0	92.1	92.1	0.1	0.2	-4.98	327.8	30.2	329.1	328.8	0.28	1,162.244	
200.0	200.0	196.2	196.2	0.3	0.3	-4.77	326.1	31.6	327.4	326.8	0.64	514.274	
300.0	300.0	300.1	300.0	0.5	0.5	-4.74	323.1	32.0	324.5	323.5	0.99	327.513	
400.0	400.0	401.7	401.4	0.6	0.7	-5.68	318.7	27.1	320.6	319.3	1.33	240.580	
500.0	500.0	501.2	500.3	0.8	1.0	-138.74	313.6	17.1	317.9	316.2	1.75	182.026	
523.9	523.9	524.0	522.8	0.9	1.0	-139.40	312.4	14.1	317.8	316.0	1.86	171.070	CC, ES
600.0	599.8	595.6	593.5	1.0	1.2	-141.88	308.7	3.2	319.2	317.0	2.21	144.198	
700.0	699.5	684.0	680.3	1.2	1.6	-145.59	304.8	-13.2	326.2	323.4	2.72	119.794	
800.0	798.7	778.0	771.9	1.5	1.9	-150.03	301.6	-33.6	339.8	336.5	3.30	103.042	
832.4	830.7	801.2	794.5	1.6	2.0	-151.15	301.2	-39.1	345.9	342.5	3.46	100.075	
900.0	897.6	855.0	846.6	1.8	2.3	-153.80	300.9	-52.3	361.0	357.2	3.81	94.826	
1,000.0	996.5	943.2	932.0	2.0	2.7	-157.76	302.2	-74.7	387.1	382.8	4.33	89.457	
1,100.0	1,095.3	1,034.1	1,019.8	2.3	3.1	-161.29	304.2	-97.6	415.5	410.7	4.83	86.087	
1,200.0	1,194.2	1,120.6	1,103.5	2.6	3.5	-164.24	306.7	-119.8	446.1	440.8	5.30	84.218	
1,300.0	1,293.0	1,204.8	1,184.4	2.9	3.9	-166.85	309.9	-142.4	479.2	473.5	5.74	83.535	SF
1,400.0	1,391.9	1,283.8	1,260.2	3.2	4.3	-169.00	314.1	-164.5	515.0	508.8	6.14	83.921	
1,500.0	1,490.8	1,363.9	1,336.6	3.6	4.8	-170.87	320.4	-187.8	553.9	547.4	6.51	85.135	
1,600.0	1,589.6	1,454.1	1,422.6	3.9	5.2	-172.66	328.2	-213.9	594.0	587.1	6.93	85.760	
1,700.0	1,688.5	1,543.0	1,507.3	4.2	5.7	-174.21	336.0	-239.7	634.6	627.3	7.30	86.886	
1,800.0	1,787.4	1,636.5	1,596.4	4.5	6.3	-175.65	344.1	-266.9	675.5	667.9	7.69	87.875	
1,900.0	1,886.2	1,740.0	1,695.4	4.8	6.8	-177.10	351.8	-296.2	715.4	707.4	8.09	88.392	
2,000.0	1,985.1	1,834.2	1,785.6	5.1	7.3	-178.34	357.3	-322.7	754.6	746.1	8.47	89.042	
2,100.0	2,083.9	1,925.7	1,873.3	5.4	7.8	-179.37	363.3	-348.0	794.0	785.2	8.84	89.864	
2,200.0	2,182.8	2,020.2	1,964.1	5.7	8.3	179.70	369.3	-373.5	833.0	823.8	9.20	90.548	
2,300.0	2,281.7	2,101.0	2,041.7	6.1	8.7	179.00	375.2	-395.4	872.7	863.2	9.53	91.552	
2,400.0	2,380.5	2,179.0	2,116.2	6.4	9.2	178.36	381.3	-417.4	913.8	904.0	9.87	92.633	
2,500.0	2,479.4	2,259.6	2,193.0	6.7	9.6	177.72	387.8	-441.2	956.2	946.0	10.20	93.700	
2,600.0	2,578.3	2,344.5	2,273.6	7.0	10.1	177.11	395.2	-466.6	999.3	988.7	10.54	94.812	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SUR

Offset Site Error: 0.0 ft

Survey Program: 216-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
10,200.0	8,036.0	8,190.4	8,075.2	40.1	21.7	-91.16	2,053.7	-100.4	995.0	936.4	58.63	16.971	
10,300.0	8,036.0	8,192.1	8,076.9	41.7	21.7	-91.27	2,053.7	-100.4	978.3	918.1	60.25	16.237	
10,400.0	8,036.0	8,193.9	8,078.7	43.2	21.7	-91.37	2,053.7	-100.3	971.7	909.9	61.89	15.702	
10,414.3	8,036.0	8,194.2	8,078.9	43.4	21.7	-91.38	2,053.7	-100.3	971.6	909.5	62.12	15.641	CC, ES
10,500.0	8,036.0	8,195.7	8,080.5	44.7	21.7	-91.47	2,053.8	-100.3	975.4	911.9	63.53	15.353	
10,600.0	8,036.0	8,197.4	8,082.2	46.3	21.7	-91.58	2,053.8	-100.3	989.2	924.0	65.18	15.176	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SUR

Offset Site Error: 0.0 ft

Survey Program: 1020-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	12.74	280.1	122.1	287.5				
100.0	100.0	87.6	87.6	0.1	0.2	12.75	280.1	122.2	287.2	286.9	0.28	1,036.088	
200.0	200.0	187.6	187.6	0.3	0.3	12.80	280.0	122.5	287.2	286.5	0.63	458.808	
300.0	300.0	287.7	287.7	0.5	0.5	12.89	279.8	122.9	287.1	286.1	0.97	294.600	
400.0	400.0	387.8	387.7	0.6	0.7	13.02	279.6	123.5	287.0	285.7	1.32	216.918	
405.3	405.3	393.1	393.1	0.7	0.7	-117.89	279.6	123.5	287.0	285.7	1.35	213.039	
500.0	500.0	487.8	487.8	0.8	0.9	-118.03	279.3	124.3	287.8	286.1	1.68	171.264	
600.0	599.8	587.8	587.8	1.0	1.0	-118.70	279.0	125.2	290.1	288.1	2.04	142.176	
700.0	699.5	687.6	687.5	1.2	1.2	-119.88	278.6	126.3	294.2	291.8	2.42	121.669	
800.0	798.7	787.1	787.0	1.5	1.4	-121.53	278.1	127.6	300.2	297.4	2.82	106.481	
832.4	830.7	819.2	819.2	1.6	1.4	-122.15	278.0	128.1	302.6	299.7	2.95	102.479	
900.0	897.6	886.3	886.2	1.8	1.6	-123.55	277.6	129.1	308.0	304.7	3.23	95.202	
1,000.0	996.5	985.5	985.4	2.0	1.7	-125.51	277.0	130.7	316.1	312.5	3.65	86.533	
1,100.0	1,095.3	1,091.0	1,090.9	2.3	1.9	-127.52	275.7	132.2	324.0	319.9	4.08	79.430	
1,200.0	1,194.2	1,201.9	1,201.7	2.6	2.1	-129.94	271.0	131.3	329.2	324.7	4.50	73.184	
1,300.0	1,293.0	1,322.1	1,321.3	2.9	2.4	-132.84	259.6	128.2	329.7	324.8	4.92	67.016	
1,400.0	1,391.9	1,431.5	1,429.6	3.2	2.6	-135.56	244.3	125.3	326.2	320.9	5.32	61.365	
1,500.0	1,490.8	1,541.2	1,537.5	3.6	2.9	-138.74	225.3	120.5	320.3	314.6	5.70	56.195	
1,600.0	1,589.6	1,647.7	1,641.5	3.9	3.3	-142.13	203.2	115.5	311.9	305.9	6.08	51.339	
1,700.0	1,688.5	1,748.3	1,739.4	4.2	3.6	-145.77	180.5	109.7	303.0	296.5	6.45	46.941	
1,800.0	1,787.4	1,852.3	1,840.0	4.5	4.0	-150.09	155.4	102.5	294.2	287.3	6.86	42.915	
1,900.0	1,886.2	1,948.6	1,933.2	4.8	4.4	-154.09	131.4	97.2	285.7	278.5	7.26	39.331	
2,000.0	1,985.1	2,049.0	2,030.3	5.1	4.9	-158.34	106.6	92.4	278.6	270.9	7.72	36.092	
2,100.0	2,083.9	2,148.9	2,126.8	5.4	5.3	-162.82	80.8	88.0	272.1	263.9	8.22	33.115	
2,200.0	2,182.8	2,244.6	2,219.2	5.7	5.7	-167.20	56.3	84.1	267.3	258.5	8.75	30.552	
2,300.0	2,281.7	2,339.3	2,310.8	6.1	6.1	-171.60	32.9	79.9	265.0	255.7	9.32	28.421	
2,348.4	2,329.5	2,386.5	2,356.6	6.2	6.3	-173.78	21.5	77.8	264.8	255.2	9.62	27.515 CC	
2,400.0	2,380.5	2,437.1	2,405.6	6.4	6.6	-176.08	9.4	75.6	265.0	255.1	9.96	26.612 ES	
2,500.0	2,479.4	2,535.5	2,501.0	6.7	7.0	179.34	-14.8	71.1	266.6	255.9	10.67	24.989	
2,600.0	2,578.3	2,633.2	2,595.5	7.0	7.5	174.75	-39.4	66.5	269.5	258.1	11.43	23.580	
2,700.0	2,677.1	2,727.3	2,686.5	7.3	7.9	170.49	-62.4	61.5	275.1	262.9	12.21	22.536	
2,800.0	2,776.0	2,825.5	2,781.8	7.6	8.3	166.40	-85.5	56.2	282.8	269.8	13.02	21.720	
2,900.0	2,874.9	2,924.6	2,877.9	7.9	8.8	162.48	-109.3	51.6	291.1	277.3	13.88	20.983	
3,000.0	2,973.7	3,019.3	2,969.4	8.3	9.2	158.69	-133.0	46.0	301.5	286.8	14.74	20.451	
3,100.0	3,072.6	3,118.3	3,064.9	8.6	9.7	154.85	-158.6	39.9	313.3	297.6	15.65	20.012	
3,200.0	3,171.4	3,214.1	3,157.4	8.9	10.1	151.52	-182.7	34.5	325.9	309.4	16.51	19.737	
3,300.0	3,270.3	3,308.1	3,248.3	9.2	10.6	148.57	-205.8	28.2	340.9	323.5	17.34	19.660	
3,400.0	3,369.2	3,408.1	3,345.1	9.5	11.1	145.69	-230.4	21.4	356.6	338.4	18.20	19.596	
3,500.0	3,468.0	3,506.2	3,439.4	9.8	11.5	142.81	-256.4	15.5	372.4	353.4	19.06	19.539 SF	
3,600.0	3,566.9	3,606.1	3,535.6	10.1	12.0	140.19	-282.4	9.4	389.1	369.2	19.89	19.561	
3,700.0	3,665.8	3,705.1	3,631.4	10.5	12.5	137.99	-307.0	4.5	405.4	384.7	20.67	19.609	
3,800.0	3,764.6	3,799.7	3,723.1	10.8	12.9	136.15	-329.8	-0.6	422.5	401.1	21.41	19.731	
3,900.0	3,863.5	3,893.1	3,813.5	11.1	13.4	134.40	-352.8	-6.3	440.9	418.7	22.14	19.912	
4,000.0	3,962.3	3,989.5	3,906.5	11.4	13.8	132.69	-377.0	-12.9	460.3	437.5	22.88	20.119	
4,100.0	4,061.2	4,089.7	4,003.2	11.7	14.3	131.02	-402.4	-19.4	479.9	456.3	23.62	20.315	
4,200.0	4,160.1	4,190.9	4,101.0	12.0	14.8	129.50	-427.6	-25.2	499.1	474.7	24.36	20.491	
4,300.0	4,258.9	4,294.2	4,201.3	12.4	15.2	128.22	-452.0	-30.4	517.6	492.6	25.05	20.666	
4,400.0	4,357.8	4,397.4	4,302.3	12.7	15.6	127.44	-472.4	-35.3	535.3	509.6	25.67	20.852	
4,500.0	4,456.7	4,502.8	4,406.1	13.0	16.0	127.00	-490.4	-39.8	551.9	525.6	26.27	21.008	
4,600.0	4,555.5	4,608.0	4,510.0	13.3	16.3	126.79	-506.0	-43.3	567.3	540.4	26.84	21.137	
4,700.0	4,654.4	4,712.7	4,613.9	13.6	16.6	126.83	-519.2	-46.3	581.8	554.4	27.37	21.258	
4,800.0	4,753.3	4,822.8	4,723.5	13.9	16.8	127.18	-529.5	-48.6	594.8	567.0	27.87	21.347	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SUR

Survey Program: 1020-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
4,900.0	4,852.1	4,926.1	4,826.5	14.3	17.0	127.70	-536.7	-49.6	606.3	578.0	28.33	21.404	
5,000.0	4,951.0	5,022.6	4,922.8	14.6	17.2	128.22	-543.0	-50.7	617.9	589.2	28.77	21.481	
5,100.0	5,049.8	5,117.8	5,017.9	14.9	17.3	128.79	-548.4	-52.4	630.2	601.0	29.19	21.591	
5,200.0	5,148.7	5,234.2	5,134.2	15.2	17.5	129.69	-552.5	-54.2	641.9	612.3	29.58	21.701	
5,300.0	5,247.6	5,333.1	5,233.1	15.5	17.6	130.62	-553.4	-54.3	651.9	622.0	29.93	21.784	
5,400.0	5,346.4	5,431.0	5,331.0	15.8	17.7	131.54	-554.1	-54.6	662.2	632.0	30.26	21.882	
5,500.0	5,445.3	5,527.3	5,427.2	16.1	17.8	132.43	-554.6	-55.2	673.0	642.4	30.59	22.002	
5,600.0	5,544.2	5,623.6	5,523.6	16.5	17.9	133.30	-555.1	-56.1	684.3	653.4	30.91	22.141	
5,700.0	5,643.0	5,722.1	5,622.1	16.8	18.0	134.16	-555.6	-57.2	696.0	664.7	31.23	22.288	
5,800.0	5,741.9	5,821.0	5,720.9	17.1	18.1	134.98	-556.2	-58.4	707.8	676.3	31.54	22.441	
5,900.0	5,840.7	5,921.2	5,821.1	17.4	18.2	135.80	-556.8	-59.5	719.7	687.8	31.85	22.599	
6,000.0	5,939.6	6,021.0	5,920.8	17.7	18.3	136.61	-557.0	-60.4	731.5	699.3	32.14	22.759	
6,100.0	6,038.5	6,119.6	6,019.5	18.0	18.4	137.41	-556.9	-61.2	743.4	711.0	32.42	22.928	
6,200.0	6,137.3	6,218.4	6,118.3	18.4	18.5	138.22	-556.4	-62.1	755.5	722.8	32.70	23.106	
6,300.0	6,236.2	6,317.3	6,217.2	18.7	18.6	139.02	-555.7	-62.9	767.7	734.7	32.96	23.289	
6,400.0	6,335.1	6,419.0	6,318.9	19.0	18.7	139.84	-554.6	-63.7	779.9	746.7	33.21	23.482	
6,500.0	6,433.9	6,523.2	6,423.1	19.3	18.7	140.72	-552.6	-63.8	791.6	758.2	33.44	23.676	
6,600.0	6,532.8	6,624.5	6,524.3	19.6	18.8	141.62	-549.8	-63.2	803.0	769.3	33.65	23.866	
6,700.0	6,631.7	6,724.8	6,624.6	19.9	18.8	142.51	-546.6	-62.5	814.3	780.5	33.85	24.059	
6,800.0	6,730.5	6,816.4	6,716.1	20.3	18.9	143.31	-543.4	-62.0	826.1	792.0	34.04	24.266	
6,900.0	6,829.4	6,906.4	6,806.0	20.6	19.0	144.10	-540.1	-62.4	839.0	804.8	34.23	24.508	
6,981.6	6,910.1	6,981.4	6,881.0	20.8	19.0	144.74	-537.1	-63.3	850.4	816.0	34.38	24.735	
7,000.0	6,928.3	6,998.4	6,898.0	20.9	19.0	149.86	-536.4	-63.6	853.0	818.6	34.40	24.799	
7,100.0	7,027.5	7,091.5	6,990.9	21.1	19.1	-170.89	-532.0	-65.4	867.1	832.6	34.44	25.178	
7,200.0	7,126.7	7,190.3	7,089.5	21.2	19.1	-133.22	-526.6	-67.6	880.4	846.0	34.46	25.550	
7,300.0	7,225.2	7,290.7	7,189.7	21.3	19.1	-114.33	-520.3	-69.6	892.4	858.0	34.47	25.888	
7,400.0	7,322.1	7,395.7	7,294.5	21.3	19.2	-105.64	-513.1	-71.2	902.9	868.5	34.48	26.188	
7,500.0	7,416.8	7,499.7	7,398.2	21.2	19.2	-101.57	-505.4	-71.8	911.9	877.4	34.46	26.459	
7,600.0	7,508.4	7,599.1	7,497.3	21.1	19.2	-99.89	-498.0	-71.7	920.1	885.7	34.41	26.739	
7,700.0	7,596.4	7,695.1	7,593.0	21.0	19.2	-99.64	-490.7	-71.1	928.5	894.2	34.32	27.055	
7,800.0	7,680.0	7,784.2	7,682.0	20.8	19.3	-100.29	-486.0	-70.2	938.2	904.0	34.22	27.421	
7,900.0	7,758.7	7,865.2	7,763.0	20.7	19.4	-101.41	-484.1	-69.0	950.7	916.7	34.03	27.937	
7,989.6	7,824.4	7,931.1	7,828.8	20.6	19.5	-102.51	-483.9	-67.8	965.6	931.7	33.84	28.531	
8,000.0	7,831.7	7,938.3	7,836.1	20.6	19.5	-102.53	-483.9	-67.7	967.5	933.7	33.82	28.610	
8,050.0	7,865.3	7,971.3	7,869.1	20.6	19.6	-102.59	-484.2	-67.1	978.0	944.3	33.70	29.022	
8,100.0	7,896.2	8,001.2	7,899.0	20.5	19.6	-102.55	-484.6	-66.5	990.1	956.5	33.59	29.476	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29XD (EXISTING) - SYNERGY WELL - GYR

Offset Site Error: 0.0 ft

Survey Program: 100-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	14.04	276.5	128.0	286.2				
100.0	100.0	73.8	73.8	0.1	0.1	14.09	276.5	128.2	285.1	284.9	0.25	1,123.800	CC
200.0	200.0	174.4	174.4	0.3	0.3	14.26	276.5	129.1	285.3	284.7	0.60	472.336	
300.0	300.0	269.1	269.1	0.5	0.5	14.57	276.7	130.8	286.0	285.0	0.94	302.773	
400.0	400.0	361.0	360.9	0.6	0.7	15.34	278.6	135.2	289.3	288.0	1.28	226.046	
500.0	500.0	452.6	452.0	0.8	0.9	-114.51	282.3	142.8	296.2	294.5	1.67	177.401	
600.0	599.8	543.3	542.0	1.0	1.1	-113.56	287.8	153.0	307.3	305.2	2.06	148.928	
700.0	699.5	633.8	631.3	1.2	1.4	-112.73	295.1	166.0	322.7	320.2	2.50	129.132	
800.0	798.7	725.3	721.0	1.5	1.8	-111.99	303.6	181.8	341.7	338.7	2.99	114.116	
832.4	830.7	754.5	749.5	1.6	1.9	-111.78	306.5	187.4	348.5	345.3	3.17	110.089	
900.0	897.6	816.0	809.3	1.8	2.2	-111.55	313.2	200.1	363.6	360.1	3.54	102.825	
1,000.0	996.5	910.6	901.0	2.0	2.6	-111.06	323.8	220.9	386.9	382.8	4.12	93.933	
1,100.0	1,095.3	1,007.2	994.4	2.3	3.1	-110.51	334.7	243.0	410.7	405.9	4.72	86.925	
1,200.0	1,194.2	1,109.4	1,093.1	2.6	3.6	-109.86	345.4	267.1	433.8	428.5	5.37	80.840	
1,300.0	1,293.0	1,209.4	1,189.8	2.9	4.0	-109.23	354.9	290.7	456.2	450.2	6.00	75.977	
1,400.0	1,391.9	1,312.0	1,289.0	3.2	4.5	-108.59	363.5	315.2	477.8	471.1	6.67	71.677	
1,500.0	1,490.8	1,406.6	1,380.5	3.6	5.0	-107.94	371.0	338.4	499.2	491.9	7.31	68.314	
1,600.0	1,589.6	1,500.0	1,470.5	3.9	5.5	-107.32	379.1	361.9	521.5	513.6	7.94	65.680	
1,700.0	1,688.5	1,595.2	1,562.2	4.2	5.9	-106.77	387.9	385.8	544.5	535.9	8.58	63.484	
1,800.0	1,787.4	1,701.5	1,664.9	4.5	6.5	-106.25	397.2	411.9	566.7	557.5	9.25	61.291	
1,900.0	1,886.2	1,800.0	1,760.2	4.8	6.9	-105.84	405.1	435.3	588.1	578.2	9.89	59.490	
2,000.0	1,985.1	1,897.0	1,854.1	5.1	7.4	-105.48	413.0	458.3	609.5	599.0	10.52	57.940	
2,100.0	2,083.9	1,997.7	1,951.6	5.4	7.9	-105.08	420.7	482.5	630.8	619.6	11.18	56.416	
2,200.0	2,182.8	2,093.1	2,043.7	5.7	8.4	-104.67	427.7	506.0	652.0	640.1	11.82	55.155	
2,300.0	2,281.7	2,186.7	2,134.0	6.1	8.8	-104.25	434.8	529.6	673.7	661.2	12.46	54.045	
2,400.0	2,380.5	2,288.8	2,232.4	6.4	9.3	-103.80	442.4	555.6	695.4	682.3	13.12	52.986	
2,500.0	2,479.4	2,380.8	2,321.4	6.7	9.8	-103.51	449.7	578.1	717.1	703.4	13.73	52.217	
2,600.0	2,578.3	2,477.3	2,414.7	7.0	10.3	-103.30	458.3	601.1	739.4	725.1	14.36	51.484	
2,700.0	2,677.1	2,576.6	2,510.7	7.3	10.7	-103.05	466.8	625.1	761.6	746.6	15.01	50.735	
2,800.0	2,776.0	2,662.4	2,593.5	7.6	11.2	-102.81	474.1	646.5	784.2	768.6	15.60	50.257	
2,900.0	2,874.9	2,761.4	2,688.8	7.9	11.7	-102.60	484.1	671.2	808.1	791.9	16.25	49.747	
3,000.0	2,973.7	2,860.5	2,784.3	8.3	12.2	-102.35	492.9	696.0	831.0	814.1	16.89	49.193	
3,100.0	3,072.6	2,952.8	2,873.1	8.6	12.7	-102.09	501.3	719.8	854.5	837.0	17.52	48.783	
3,200.0	3,171.4	3,050.4	2,967.0	8.9	13.2	-101.84	510.5	745.0	878.3	860.1	18.16	48.370	
3,300.0	3,270.3	3,152.1	3,064.7	9.2	13.7	-101.58	519.5	771.3	901.6	882.8	18.81	47.927	
3,400.0	3,369.2	3,251.4	3,160.3	9.5	14.2	-101.32	528.0	797.0	924.7	905.2	19.46	47.513	
3,500.0	3,468.0	3,353.5	3,258.6	9.8	14.8	-101.05	536.3	823.5	947.5	927.4	20.13	47.079	
3,600.0	3,566.9	3,456.0	3,357.3	10.1	15.3	-100.76	543.6	850.4	969.6	948.8	20.79	46.639	
3,700.0	3,665.8	3,551.6	3,449.2	10.5	15.8	-100.49	550.4	875.4	991.6	970.2	21.43	46.272	
8,100.0	7,896.2	7,996.6	7,856.7	20.5	24.9	24.62	691.6	1,204.7	962.8	934.5	28.25	34.082	
8,150.0	7,924.4	8,024.8	7,884.9	20.5	25.0	28.89	691.9	1,205.1	923.5	896.6	26.95	34.267	
8,200.0	7,949.6	8,050.0	7,910.1	20.5	25.0	33.97	692.1	1,205.5	882.7	856.7	26.06	33.870	
8,250.0	7,971.8	8,072.3	7,932.4	20.6	25.0	40.00	692.4	1,205.8	840.8	815.0	25.79	32.602	
8,300.0	7,990.8	8,091.6	7,951.7	20.6	25.0	47.04	692.6	1,206.1	797.8	771.6	26.24	30.400	
8,350.0	8,006.6	8,107.9	7,968.0	20.7	25.1	55.02	692.8	1,206.4	754.2	726.9	27.34	27.581	
8,400.0	8,019.1	8,121.0	7,981.1	20.8	25.1	63.62	693.0	1,206.6	710.3	681.5	28.77	24.690	
8,450.0	8,028.1	8,130.7	7,990.8	21.0	25.1	72.27	693.1	1,206.7	666.4	636.3	30.08	22.156	
8,500.0	8,033.7	8,137.0	7,997.1	21.1	25.1	80.34	693.2	1,206.8	623.0	592.1	30.96	20.122	
8,550.0	8,035.9	8,139.8	7,999.8	21.3	25.1	87.31	693.2	1,206.9	580.5	549.2	31.34	18.523	
8,556.4	8,036.0	8,139.9	7,999.9	21.4	25.1	88.10	693.2	1,206.9	575.2	543.8	31.36	18.344	
8,600.0	8,036.0	8,140.4	8,000.5	21.6	25.1	88.19	693.2	1,206.9	539.3	507.7	31.65	17.041	
8,700.0	8,036.0	8,141.6	8,001.6	22.2	25.1	88.41	693.2	1,206.9	462.2	429.8	32.44	14.251	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29XD (EXISTING) - SYNERGY WELL - GYR

Offset Site Error: 0.0 ft

Survey Program: 100-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	8,036.0	8,142.7	8,002.8	22.9	25.1	88.62	693.3	1,206.9	395.5	362.2	33.36	11.855	
8,900.0	8,036.0	8,143.9	8,004.0	23.7	25.1	88.84	693.3	1,206.9	345.3	310.9	34.41	10.034	
9,000.0	8,036.0	8,145.1	8,005.2	24.6	25.1	89.05	693.3	1,206.9	319.4	283.8	35.56	8.981	
9,036.2	8,036.0	8,145.5	8,005.6	24.9	25.1	89.13	693.3	1,206.9	317.3	281.3	36.00	8.813	ES
9,100.0	8,036.0	8,146.3	8,006.4	25.6	25.1	89.26	693.3	1,207.0	323.7	286.9	36.79	8.798	SF
9,200.0	8,036.0	8,147.5	8,007.6	26.7	25.1	89.48	693.3	1,207.0	357.1	319.0	38.09	9.375	
9,300.0	8,036.0	8,148.7	8,008.7	27.8	25.1	89.69	693.3	1,207.0	412.7	373.2	39.45	10.460	
9,400.0	8,036.0	8,149.8	8,009.9	29.0	25.1	89.90	693.3	1,207.0	482.8	441.9	40.86	11.814	
9,500.0	8,036.0	8,151.0	8,011.1	30.3	25.1	90.11	693.4	1,207.0	562.0	519.7	42.31	13.282	
9,600.0	8,036.0	8,152.2	8,012.3	31.6	25.1	90.33	693.4	1,207.0	647.0	603.2	43.79	14.773	
9,700.0	8,036.0	8,153.3	8,013.4	32.9	25.1	90.54	693.4	1,207.1	735.7	690.4	45.31	16.239	
9,800.0	8,036.0	8,154.5	8,014.6	34.3	25.1	90.75	693.4	1,207.1	827.1	780.2	46.84	17.656	
9,900.0	8,036.0	8,155.7	8,015.8	35.7	25.1	90.96	693.4	1,207.1	920.2	871.8	48.40	19.012	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 33-29PD (EXISTING) - SYNERGY WELL - S

Offset Site Error: 0.0 ft

Survey Program: 127-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	-6.53	339.9	19.9	342.4				
100.0	100.0	87.1	87.1	0.1	0.1	-6.53	339.9	19.9	342.2	341.9	0.26	1,309.817	CC, ES
200.0	200.0	184.4	184.4	0.3	0.3	-6.55	340.3	19.7	342.6	342.0	0.60	571.977	
300.0	300.0	283.3	283.2	0.5	0.5	-6.65	341.4	19.0	343.8	342.9	0.95	362.845	
400.0	400.0	384.3	384.3	0.6	0.7	-6.85	342.4	17.7	344.9	343.6	1.30	265.294	
500.0	500.0	482.2	482.2	0.8	0.8	-138.16	343.3	16.1	347.3	345.7	1.65	211.021	
600.0	599.8	580.6	580.5	1.0	1.0	-139.14	344.6	12.8	353.0	351.0	2.00	176.138	
700.0	699.5	680.4	680.2	1.2	1.2	-140.71	345.7	7.8	361.6	359.2	2.38	152.079	
800.0	798.7	776.0	775.6	1.5	1.4	-142.51	346.9	2.3	373.5	370.8	2.76	135.475	
832.4	830.7	806.6	806.1	1.6	1.4	-143.11	347.5	0.5	378.2	375.4	2.88	131.405	
900.0	897.6	870.0	869.4	1.8	1.6	-144.38	349.0	-2.7	388.9	385.7	3.13	124.086	
1,000.0	996.5	963.6	962.8	2.0	1.8	-146.03	352.3	-7.0	405.8	402.3	3.51	115.681	
1,100.0	1,095.3	1,055.0	1,054.1	2.3	1.9	-147.47	356.6	-11.1	424.2	420.3	3.87	109.476	
1,200.0	1,194.2	1,149.0	1,147.8	2.6	2.1	-148.78	362.5	-15.3	444.2	440.0	4.24	104.752	
1,300.0	1,293.0	1,229.6	1,228.0	2.9	2.3	-149.87	369.1	-20.0	466.8	462.2	4.59	101.717	
1,400.0	1,391.9	1,311.8	1,309.4	3.2	2.6	-151.05	377.8	-26.8	492.4	487.5	4.94	99.783	
1,500.0	1,490.8	1,394.3	1,390.9	3.6	2.8	-152.18	388.3	-35.0	521.0	515.7	5.28	98.691	
1,600.0	1,589.6	1,475.2	1,470.4	3.9	3.1	-153.26	400.2	-44.3	552.1	546.4	5.62	98.266	SF
1,700.0	1,688.5	1,556.1	1,549.4	4.2	3.4	-154.32	413.6	-55.0	585.7	579.8	5.95	98.429	
1,800.0	1,787.4	1,642.1	1,633.1	4.5	3.7	-155.29	429.4	-66.7	621.2	615.0	6.29	98.802	
1,900.0	1,886.2	1,731.2	1,719.7	4.8	4.1	-156.23	445.9	-79.4	657.4	650.7	6.63	99.169	
2,000.0	1,985.1	1,809.5	1,795.5	5.1	4.4	-157.04	461.2	-91.6	695.1	688.1	6.95	100.014	
2,100.0	2,083.9	1,898.0	1,880.9	5.4	4.8	-157.89	479.4	-106.3	734.2	726.9	7.28	100.800	
2,200.0	2,182.8	1,980.5	1,960.3	5.7	5.2	-158.58	497.1	-120.0	774.2	766.6	7.60	101.843	
2,300.0	2,281.7	2,050.3	2,027.2	6.1	5.6	-159.07	513.3	-131.4	815.7	807.8	7.90	103.224	
2,400.0	2,380.5	2,120.1	2,093.6	6.4	6.0	-159.50	531.2	-143.6	859.8	851.6	8.20	104.822	
2,500.0	2,479.4	2,201.0	2,170.0	6.7	6.4	-159.99	553.0	-158.8	905.5	897.0	8.52	106.337	
2,600.0	2,578.3	2,306.7	2,270.2	7.0	7.0	-160.55	580.6	-177.9	950.4	941.5	8.87	107.190	
2,700.0	2,677.1	2,392.7	2,351.9	7.3	7.5	-161.05	601.9	-194.4	994.7	985.5	9.19	108.282	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 34-29D (EXISTING) - SYNERGY WELL - SU

Offset Site Error: 0.0 ft

Survey Program: 217-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	-0.95	319.8	53.5	320.9				
100.0	100.0	75.5	75.4	0.1	0.1	-0.89	319.7	53.8	319.8	319.6	0.26	1,228.609	
200.0	200.0	176.7	176.7	0.3	0.3	-0.61	319.3	55.4	319.3	318.7	0.62	518.064	
300.0	300.0	278.8	278.7	0.5	0.5	-0.24	318.3	57.5	318.4	317.4	0.97	327.805	
400.0	400.0	377.6	377.6	0.6	0.7	-0.31	317.0	57.1	317.1	315.7	1.31	241.117	
434.0	434.0	411.1	411.0	0.7	0.7	-131.38	316.7	56.4	316.9	315.5	1.43	221.858	CC, ES
500.0	500.0	477.5	477.4	0.8	0.8	-131.91	316.1	54.6	317.4	315.7	1.66	191.414	
600.0	599.8	579.0	578.8	1.0	1.0	-133.24	314.8	50.9	319.8	317.7	2.02	158.491	
700.0	699.5	676.5	676.3	1.2	1.2	-134.96	313.5	47.1	324.7	322.3	2.38	136.211	
800.0	798.7	775.9	775.6	1.5	1.4	-136.78	312.6	44.5	332.8	330.1	2.77	120.314	
832.4	830.7	807.3	807.0	1.6	1.4	-137.37	312.4	43.9	336.1	333.2	2.89	116.254	
900.0	897.6	872.8	872.5	1.8	1.5	-138.69	312.0	42.7	343.5	340.3	3.15	108.908	
1,000.0	996.5	971.6	971.3	2.0	1.7	-140.59	311.6	40.9	354.9	351.3	3.54	100.106	
1,100.0	1,095.3	1,070.8	1,070.4	2.3	1.9	-142.43	311.0	38.7	366.5	362.6	3.93	93.150	
1,200.0	1,194.2	1,168.9	1,168.6	2.6	2.1	-144.15	310.5	36.5	378.6	374.3	4.32	87.660	
1,300.0	1,293.0	1,267.8	1,267.4	2.9	2.2	-145.79	309.9	34.2	391.0	386.3	4.70	83.176	
1,400.0	1,391.9	1,367.2	1,366.8	3.2	2.4	-147.34	309.3	31.8	403.7	398.6	5.08	79.503	
1,500.0	1,490.8	1,469.9	1,469.4	3.6	2.6	-148.80	308.1	29.9	415.9	410.4	5.46	76.176	
1,600.0	1,589.6	1,569.0	1,568.4	3.9	2.8	-150.56	305.3	25.1	427.8	421.9	5.84	73.272	
1,700.0	1,688.5	1,666.3	1,665.2	4.2	3.0	-152.65	301.5	17.2	440.3	434.1	6.22	70.809	
1,800.0	1,787.4	1,762.4	1,760.6	4.5	3.2	-155.05	296.5	6.0	453.7	447.0	6.61	68.682	
1,900.0	1,886.2	1,858.7	1,855.8	4.8	3.5	-157.63	290.7	-7.6	468.2	461.2	7.00	66.846	
2,000.0	1,985.1	1,958.6	1,954.1	5.1	3.8	-160.39	283.5	-23.5	483.4	476.0	7.43	65.099	
2,100.0	2,083.9	2,054.2	2,047.9	5.4	4.1	-163.09	275.1	-40.0	499.1	491.3	7.86	63.519	
2,200.0	2,182.8	2,144.0	2,135.6	5.7	4.4	-165.69	266.7	-57.4	516.7	508.4	8.30	62.240	
2,300.0	2,281.7	2,229.8	2,218.8	6.1	4.8	-168.26	258.4	-76.5	536.8	528.0	8.75	61.329	
2,400.0	2,380.5	2,323.1	2,308.9	6.4	5.1	-171.00	249.5	-99.1	559.5	550.2	9.24	60.548	
2,500.0	2,479.4	2,421.7	2,404.0	6.7	5.6	-173.75	239.0	-122.7	582.5	572.7	9.76	59.695	
2,600.0	2,578.3	2,519.6	2,498.4	7.0	6.0	-176.30	227.9	-146.2	606.1	595.9	10.28	58.951	
2,700.0	2,677.1	2,613.0	2,588.6	7.3	6.4	-178.56	216.9	-168.1	630.3	619.5	10.79	58.424	
2,800.0	2,776.0	2,703.8	2,676.4	7.6	6.8	179.49	207.3	-189.1	655.8	644.6	11.28	58.148	
2,900.0	2,874.9	2,792.5	2,762.2	7.9	7.2	177.76	198.7	-209.7	682.6	670.8	11.77	57.980	
3,000.0	2,973.7	2,885.1	2,851.4	8.3	7.7	175.97	189.1	-232.5	710.7	698.4	12.29	57.845	
3,100.0	3,072.6	2,978.2	2,941.3	8.6	8.1	174.30	179.2	-255.2	739.2	726.4	12.81	57.723	SF
3,200.0	3,171.4	3,064.7	3,024.5	8.9	8.5	172.83	170.0	-277.0	768.8	755.5	13.30	57.797	
3,300.0	3,270.3	3,209.0	3,165.0	9.2	8.7	172.31	172.9	-298.7	797.8	784.3	13.48	59.189	
3,400.0	3,369.2	3,272.7	3,227.7	9.5	9.0	172.90	182.6	-300.9	824.2	810.3	13.91	59.247	
3,500.0	3,468.0	3,361.7	3,314.1	9.8	9.4	171.90	177.0	-321.1	854.3	839.9	14.40	59.343	
3,600.0	3,566.9	3,460.1	3,409.3	10.1	9.9	170.65	167.3	-343.8	883.4	868.5	14.92	59.226	
3,700.0	3,665.8	3,549.6	3,495.7	10.5	10.3	169.52	158.0	-365.3	913.3	897.9	15.42	59.229	
3,800.0	3,764.6	3,667.3	3,609.2	10.8	10.8	168.08	144.5	-393.4	943.1	927.1	16.01	58.899	
3,900.0	3,863.5	3,756.1	3,695.2	11.1	11.3	167.11	134.3	-412.9	971.5	955.0	16.51	58.858	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 41-29D (EXISTING) - SYNERGY WELL - SU

Offset Site Error: 0.0 ft

Survey Program: 248-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
11,500.0	8,036.0	8,167.8	8,033.5	60.9	23.5	-85.93	4,042.7	465.0	972.6	891.1	81.55	11.927	
11,600.0	8,036.0	8,169.8	8,035.4	62.5	23.5	-86.22	4,042.7	465.0	881.4	798.1	83.28	10.584	
11,700.0	8,036.0	8,171.7	8,037.3	64.2	23.5	-86.51	4,042.8	464.9	792.4	707.3	85.01	9.321	
11,800.0	8,036.0	8,173.6	8,039.3	65.8	23.5	-86.80	4,042.8	464.9	706.2	619.5	86.75	8.141	
11,900.0	8,036.0	8,175.6	8,041.2	67.5	23.5	-87.09	4,042.8	464.8	624.2	535.7	88.48	7.055	
12,000.0	8,036.0	8,177.5	8,043.1	69.2	23.5	-87.38	4,042.9	464.8	548.2	458.0	90.22	6.077	
12,100.0	8,036.0	8,179.4	8,045.1	70.8	23.5	-87.68	4,042.9	464.7	481.1	389.1	91.95	5.232	
12,200.0	8,036.0	8,181.4	8,047.0	72.5	23.5	-87.97	4,042.9	464.7	427.0	333.3	93.69	4.557	
12,300.0	8,036.0	8,183.3	8,049.0	74.2	23.5	-88.26	4,043.0	464.6	391.4	296.0	95.43	4.101	
12,395.7	8,036.0	8,185.2	8,050.8	75.8	23.5	-88.55	4,043.0	464.6	379.5	282.4	97.09	3.909	CC
12,400.0	8,036.0	8,185.3	8,050.9	75.9	23.5	-88.56	4,043.0	464.6	379.5	282.4	97.17	3.906	ES, SF
12,500.0	8,036.0	8,187.3	8,052.9	77.6	23.5	-88.86	4,043.0	464.5	393.6	294.7	98.90	3.979	
12,600.0	8,036.0	8,189.2	8,054.9	79.3	23.5	-89.15	4,043.1	464.5	431.0	330.4	100.64	4.283	
12,700.0	8,036.0	8,191.2	8,056.8	81.0	23.5	-89.45	4,043.1	464.4	486.4	384.0	102.38	4.751	
12,800.0	8,036.0	8,193.2	8,058.8	82.7	23.5	-89.75	4,043.2	464.4	554.5	450.4	104.11	5.326	
12,900.0	8,036.0	8,195.1	8,060.8	84.4	23.5	-90.05	4,043.2	464.3	631.1	525.2	105.84	5.962	
13,000.0	8,036.0	8,197.1	8,062.8	86.1	23.5	-90.34	4,043.2	464.3	713.5	605.9	107.58	6.633	
13,100.0	8,036.0	8,199.1	8,064.7	87.8	23.5	-90.64	4,043.3	464.2	799.9	690.6	109.31	7.318	
13,200.0	8,036.0	8,201.1	8,066.7	89.5	23.5	-90.94	4,043.3	464.2	889.2	778.2	111.03	8.009	
13,300.0	8,036.0	8,203.1	8,068.7	91.2	23.5	-91.24	4,043.3	464.1	980.6	867.8	112.76	8.696	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 42-29D (EXISTING) - SYNERGY WELL - SU

Offset Site Error: 0.0 ft

Survey Program: 125-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
9,900.0	8,036.0	8,150.7	8,080.4	35.7	19.2	-96.60	2,524.2	683.7	990.9	942.0	48.91	20.261	
10,000.0	8,036.0	8,148.8	8,078.6	37.2	19.2	-96.03	2,524.2	683.7	892.8	842.3	50.51	17.676	
10,100.0	8,036.0	8,147.0	8,076.7	38.7	19.2	-95.44	2,524.3	683.7	795.2	743.1	52.13	15.254	
10,200.0	8,036.0	8,145.1	8,074.8	40.1	19.2	-94.85	2,524.3	683.6	698.2	644.4	53.76	12.987	
10,300.0	8,036.0	8,143.1	8,072.9	41.7	19.2	-94.24	2,524.4	683.6	602.2	546.8	55.40	10.869	
10,400.0	8,036.0	8,141.2	8,070.9	43.2	19.2	-93.62	2,524.4	683.6	507.8	450.7	57.06	8.899	
10,500.0	8,036.0	8,139.2	8,068.9	44.7	19.2	-93.00	2,524.4	683.6	415.9	357.2	58.72	7.083	
10,600.0	8,036.0	8,137.2	8,066.9	46.3	19.2	-92.36	2,524.5	683.6	328.8	268.4	60.38	5.445	
10,700.0	8,036.0	8,135.1	8,064.9	47.9	19.2	-91.70	2,524.5	683.5	251.5	189.4	62.05	4.053	
10,800.0	8,036.0	8,133.0	8,062.8	49.5	19.2	-91.04	2,524.6	683.5	195.9	132.1	63.72	3.074	
10,874.4	8,036.0	8,131.4	8,061.2	50.7	19.2	-90.54	2,524.6	683.5	181.2	116.2	64.96	2.789	CC, ES, SF
10,900.0	8,036.0	8,130.9	8,060.6	51.1	19.2	-90.36	2,524.6	683.5	183.0	117.6	65.38	2.798	
11,000.0	8,036.0	8,128.7	8,058.4	52.7	19.2	-89.68	2,524.7	683.5	220.4	153.4	67.05	3.287	
11,100.0	8,036.0	8,126.5	8,056.2	54.3	19.2	-88.98	2,524.7	683.5	289.3	220.6	68.71	4.210	
11,200.0	8,036.0	8,124.2	8,054.0	55.9	19.2	-88.26	2,524.8	683.4	372.5	302.2	70.37	5.294	
11,300.0	8,036.0	8,121.9	8,051.7	57.6	19.2	-87.54	2,524.8	683.4	462.4	390.4	72.02	6.421	
11,400.0	8,036.0	8,119.6	8,049.3	59.2	19.2	-86.80	2,524.9	683.4	555.8	482.1	73.65	7.546	
11,500.0	8,036.0	8,117.2	8,047.0	60.9	19.2	-86.05	2,524.9	683.4	651.1	575.8	75.28	8.649	
11,600.0	8,036.0	8,114.8	8,044.5	62.5	19.2	-85.29	2,525.0	683.3	747.7	670.8	76.90	9.723	
11,700.0	8,036.0	8,112.3	8,042.1	64.2	19.2	-84.51	2,525.0	683.3	845.0	766.5	78.50	10.764	
11,800.0	8,036.0	8,109.8	8,039.5	65.8	19.1	-83.73	2,525.1	683.3	942.9	862.8	80.09	11.774	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - SU

Offset Site Error: 0.0 ft

Survey Program: 211-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	2.17	310.4	70.6	310.8				
100.0	100.0	88.4	88.4	0.1	0.1	2.21	310.3	70.8	310.6	310.4	0.27	1,150.135	
200.0	200.0	188.4	188.4	0.3	0.3	2.36	310.3	71.6	310.7	310.0	0.61	510.307	
300.0	300.0	284.9	284.9	0.5	0.5	2.61	310.7	73.0	311.1	310.2	0.95	327.685	
400.0	400.0	376.8	376.7	0.6	0.7	3.00	312.8	75.2	313.5	312.2	1.28	244.161	
500.0	500.0	469.0	468.8	0.8	0.8	-127.50	317.2	78.5	319.6	317.9	1.64	195.100	
600.0	599.8	558.8	558.2	1.0	1.0	-127.36	323.8	82.4	330.3	328.3	1.99	166.093	
700.0	699.5	645.3	644.1	1.2	1.3	-127.39	332.9	87.3	346.4	344.1	2.35	147.187	
800.0	798.7	731.2	728.9	1.5	1.5	-127.51	345.0	93.3	368.2	365.4	2.75	134.046	
832.4	830.7	759.0	756.3	1.6	1.6	-127.56	349.4	95.5	376.3	373.4	2.88	130.712	
900.0	897.6	816.6	812.8	1.8	1.8	-127.90	359.4	100.6	394.4	391.3	3.17	124.483	
1,000.0	996.5	903.2	897.2	2.0	2.2	-128.15	376.3	109.7	423.5	419.8	3.61	117.167	
1,100.0	1,095.3	995.9	987.3	2.3	2.6	-128.26	395.7	120.4	453.9	449.8	4.09	110.983	
1,200.0	1,194.2	1,086.6	1,075.2	2.6	3.0	-128.24	414.7	131.9	484.4	479.8	4.57	105.905	
1,300.0	1,293.0	1,166.1	1,151.8	2.9	3.4	-128.15	433.3	142.5	517.3	512.2	5.04	102.725	
1,400.0	1,391.9	1,250.3	1,232.4	3.2	3.8	-128.12	454.8	153.3	552.3	546.8	5.50	100.339	
1,500.0	1,490.8	1,336.0	1,314.2	3.6	4.3	-128.17	478.4	163.6	589.1	583.1	5.97	98.625	
1,600.0	1,589.6	1,418.8	1,392.9	3.9	4.8	-128.24	502.3	173.3	627.2	620.8	6.44	97.394	
1,700.0	1,688.5	1,517.1	1,486.2	4.2	5.3	-128.22	530.7	185.8	665.5	658.5	6.96	95.601	
1,800.0	1,787.4	1,609.2	1,573.6	4.5	5.8	-128.13	556.8	198.2	703.2	695.7	7.46	94.210	
1,900.0	1,886.2	1,717.5	1,676.8	4.8	6.4	-128.13	586.6	211.8	740.1	732.1	8.00	92.556	
2,000.0	1,985.1	1,820.2	1,775.4	5.1	6.9	-128.27	613.0	223.0	775.2	766.7	8.50	91.145	
2,100.0	2,083.9	1,914.7	1,866.2	5.4	7.4	-128.37	637.2	233.3	810.1	801.1	9.01	89.950	
2,200.0	2,182.8	2,029.5	1,977.0	5.7	8.0	-128.39	663.8	247.3	842.6	833.1	9.57	88.053	
2,300.0	2,281.7	2,109.5	2,054.1	6.1	8.4	-128.39	682.7	257.2	875.8	865.7	10.04	87.217	
2,400.0	2,380.5	2,194.2	2,135.5	6.4	8.8	-128.41	703.9	267.4	910.1	899.6	10.52	86.496	
2,500.0	2,479.4	2,289.2	2,226.6	6.7	9.3	-128.43	728.1	278.8	945.0	934.0	11.03	85.687	
2,600.0	2,578.3	2,403.7	2,336.9	7.0	9.9	-128.48	755.8	292.1	978.7	967.1	11.59	84.467	
8,800.0	8,036.0	8,180.8	8,028.7	22.9	25.3	-90.88	1,371.0	606.6	961.8	921.0	40.81	23.567	
8,900.0	8,036.0	8,181.1	8,028.9	23.7	25.3	-90.93	1,371.0	606.7	866.4	824.5	41.86	20.696	
9,000.0	8,036.0	8,181.4	8,029.2	24.6	25.3	-90.99	1,371.0	606.7	772.2	729.1	43.01	17.951	
9,100.0	8,036.0	8,181.6	8,029.5	25.6	25.3	-91.05	1,371.0	606.7	679.6	635.3	44.25	15.358	
9,200.0	8,036.0	8,181.9	8,029.7	26.7	25.3	-91.10	1,371.0	606.7	589.4	543.9	45.56	12.939	
9,300.0	8,036.0	8,182.2	8,030.0	27.8	25.3	-91.16	1,371.0	606.7	503.0	456.1	46.92	10.721	
9,400.0	8,036.0	8,182.5	8,030.3	29.0	25.3	-91.22	1,371.0	606.7	422.6	374.3	48.33	8.745	
9,500.0	8,036.0	8,182.7	8,030.5	30.3	25.3	-91.27	1,371.0	606.7	352.5	302.7	49.79	7.080	
9,600.0	8,036.0	8,183.0	8,030.8	31.6	25.3	-91.33	1,371.0	606.7	299.7	248.4	51.27	5.845	
9,700.0	8,036.0	8,183.3	8,031.1	32.9	25.3	-91.39	1,371.0	606.7	274.6	221.9	52.79	5.203	
9,722.0	8,036.0	8,183.3	8,031.1	33.2	25.3	-91.40	1,371.0	606.7	273.8	220.6	53.13	5.153	CC, ES, SF
9,800.0	8,036.0	8,183.5	8,031.4	34.3	25.3	-91.44	1,371.0	606.7	284.7	230.3	54.33	5.239	
9,900.0	8,036.0	8,183.8	8,031.6	35.7	25.3	-91.50	1,371.0	606.7	326.5	270.6	55.89	5.842	
10,000.0	8,036.0	8,184.1	8,031.9	37.2	25.3	-91.56	1,371.0	606.7	390.2	332.7	57.48	6.788	
10,100.0	8,036.0	8,184.3	8,032.2	38.7	25.3	-91.61	1,371.0	606.7	466.7	407.6	59.07	7.901	
10,200.0	8,036.0	8,184.6	8,032.4	40.1	25.3	-91.67	1,371.0	606.7	550.8	490.2	60.68	9.077	
10,300.0	8,036.0	8,184.9	8,032.7	41.7	25.3	-91.72	1,371.0	606.7	639.5	577.2	62.31	10.264	
10,400.0	8,036.0	8,185.1	8,033.0	43.2	25.3	-91.78	1,371.0	606.8	731.2	667.2	63.94	11.435	
10,500.0	8,036.0	8,185.4	8,033.2	44.7	25.3	-91.84	1,371.0	606.8	824.8	759.2	65.58	12.575	
10,600.0	8,036.0	8,185.7	8,033.5	46.3	25.3	-91.89	1,371.0	606.8	919.7	852.4	67.24	13.678	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - PL

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	22.03	256.1	162.4	277.3				
100.0	100.0	76.5	76.5	0.1	0.1	22.03	256.1	162.4	276.3	276.1	0.26	1,069.552	
200.0	200.0	176.5	176.5	0.3	0.3	22.03	256.1	162.4	276.3	275.7	0.61	454.950	
300.0	300.0	276.5	276.5	0.5	0.5	22.03	256.1	162.4	276.3	275.4	0.96	288.910	
400.0	400.0	376.5	376.5	0.6	0.7	22.03	256.1	162.4	276.3	275.0	1.31	211.661	CC
500.0	500.0	476.5	476.5	0.8	0.8	-109.22	256.1	162.4	276.9	275.2	1.66	167.159	
600.0	599.8	576.3	576.3	1.0	1.0	-110.20	256.1	162.4	278.7	276.6	2.02	138.111	
700.0	699.5	676.0	676.0	1.2	1.2	-111.80	256.1	162.4	281.8	279.4	2.40	117.464	
800.0	798.7	775.2	775.2	1.5	1.4	-113.96	256.1	162.4	286.6	283.8	2.81	102.050	
832.4	830.7	807.2	807.2	1.6	1.4	-114.77	256.1	162.4	288.5	285.6	2.94	97.980	
900.0	897.6	874.1	874.1	1.8	1.5	-116.56	256.1	162.4	293.0	289.7	3.23	90.630	
1,000.0	996.5	973.0	973.0	2.0	1.7	-119.11	256.1	162.4	300.0	296.4	3.66	81.984	
1,100.0	1,095.3	1,075.4	1,075.4	2.3	1.9	-121.45	255.5	163.3	307.3	303.2	4.09	75.082	
1,200.0	1,194.2	1,179.9	1,179.8	2.6	2.1	-123.15	252.8	167.1	313.4	308.8	4.53	69.105	
1,300.0	1,293.0	1,285.2	1,284.7	2.9	2.3	-124.18	247.9	174.0	317.9	312.9	4.99	63.685	
1,400.0	1,391.9	1,390.8	1,389.6	3.2	2.5	-124.58	240.7	184.2	320.7	315.3	5.48	58.577	
1,500.0	1,490.8	1,496.6	1,494.1	3.6	2.8	-124.37	231.3	197.5	321.8	315.8	6.00	53.645	
1,600.0	1,589.6	1,599.7	1,595.4	3.9	3.1	-123.63	220.1	213.2	321.3	314.7	6.56	48.983	
1,700.0	1,688.5	1,699.6	1,693.4	4.2	3.4	-122.81	208.9	229.0	320.5	313.4	7.13	44.924	
1,800.0	1,787.4	1,799.5	1,791.4	4.5	3.7	-121.99	197.8	244.7	319.8	312.1	7.73	41.379	
1,900.0	1,886.2	1,899.4	1,889.5	4.8	4.0	-121.16	186.6	260.4	319.1	310.8	8.34	38.275	
2,000.0	1,985.1	1,999.3	1,987.5	5.1	4.4	-120.33	175.4	276.2	318.6	309.6	8.96	35.547	
2,100.0	2,083.9	2,099.2	2,085.5	5.4	4.7	-119.50	164.3	291.9	318.1	308.5	9.60	33.139	
2,200.0	2,182.8	2,199.1	2,183.5	5.7	5.1	-118.66	153.1	307.7	317.6	307.4	10.25	31.005	
2,300.0	2,281.7	2,299.0	2,281.5	6.1	5.4	-117.83	141.9	323.4	317.3	306.4	10.90	29.104	
2,400.0	2,380.5	2,398.9	2,379.5	6.4	5.8	-116.99	130.8	339.2	317.0	305.4	11.57	27.405	
2,500.0	2,479.4	2,498.8	2,477.5	6.7	6.1	-116.15	119.6	354.9	316.8	304.5	12.24	25.880	
2,600.0	2,578.3	2,598.6	2,575.5	7.0	6.5	-115.31	108.4	370.7	316.6	303.7	12.92	24.506	
2,700.0	2,677.1	2,698.5	2,673.5	7.3	6.9	-114.47	97.3	386.4	316.5	302.9	13.61	23.263	
2,785.9	2,762.1	2,784.4	2,757.7	7.6	7.2	-113.74	87.7	399.9	316.5	302.3	14.20	22.287	
2,800.0	2,776.0	2,798.4	2,771.5	7.6	7.2	-113.62	86.1	402.1	316.5	302.2	14.30	22.135	
2,900.0	2,874.9	2,898.3	2,869.5	7.9	7.6	-112.78	74.9	417.9	316.5	301.5	14.99	21.109	
3,000.0	2,973.7	2,998.2	2,967.5	8.3	8.0	-111.94	63.8	433.6	316.6	300.9	15.70	20.172	
3,100.0	3,072.6	3,098.1	3,065.6	8.6	8.4	-111.10	52.6	449.4	316.8	300.4	16.40	19.315	
3,200.0	3,171.4	3,198.0	3,163.6	8.9	8.7	-110.26	41.4	465.1	317.1	299.9	17.11	18.528	
3,300.0	3,270.3	3,297.9	3,261.6	9.2	9.1	-109.42	30.3	480.9	317.4	299.6	17.83	17.805	
3,400.0	3,369.2	3,397.8	3,359.6	9.5	9.5	-108.59	19.1	496.6	317.8	299.2	18.54	17.138	
3,500.0	3,468.0	3,497.7	3,457.6	9.8	9.9	-107.75	7.9	512.4	318.2	299.0	19.26	16.523	
3,600.0	3,566.9	3,597.6	3,555.6	10.1	10.2	-106.92	-3.2	528.1	318.7	298.8	19.98	15.954	
3,700.0	3,665.8	3,697.5	3,653.6	10.5	10.6	-106.09	-14.4	543.8	319.3	298.6	20.70	15.426	
3,800.0	3,764.6	3,797.3	3,751.6	10.8	11.0	-105.27	-25.6	559.6	320.0	298.6	21.42	14.936	
3,900.0	3,863.5	3,897.2	3,849.6	11.1	11.4	-104.44	-36.7	575.3	320.7	298.6	22.15	14.481	
4,000.0	3,962.3	3,997.1	3,947.6	11.4	11.7	-103.63	-47.9	591.1	321.5	298.6	22.87	14.058	
4,100.0	4,061.2	4,097.0	4,045.6	11.7	12.1	-102.81	-59.1	606.8	322.3	298.7	23.59	13.663	
4,200.0	4,160.1	4,196.9	4,143.7	12.0	12.5	-102.00	-70.2	622.6	323.2	298.9	24.32	13.294	
4,300.0	4,258.9	4,296.8	4,241.7	12.4	12.9	-101.20	-81.4	638.3	324.2	299.2	25.04	12.949	
4,400.0	4,357.8	4,396.7	4,339.7	12.7	13.3	-100.40	-92.6	654.1	325.3	299.5	25.76	12.627	
4,500.0	4,456.7	4,496.6	4,437.7	13.0	13.6	-99.60	-103.7	669.8	326.4	299.9	26.48	12.326	
4,600.0	4,555.5	4,595.9	4,535.3	13.3	14.0	-99.07	-114.0	684.3	327.6	300.5	27.14	12.070	
4,700.0	4,654.4	4,695.1	4,633.6	13.6	14.2	-99.13	-122.4	696.1	329.1	301.4	27.74	11.866	
4,800.0	4,753.3	4,794.3	4,732.1	13.9	14.5	-99.79	-128.7	705.0	330.8	302.6	28.26	11.709	
4,900.0	4,852.1	4,893.0	4,830.5	14.3	14.7	-101.02	-133.1	711.2	332.9	304.2	28.70	11.601	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - PL

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,951.0	4,991.1	4,928.6	14.6	14.8	-102.80	-135.5	714.5	335.6	306.5	29.05	11.552	
5,100.0	5,049.8	5,088.9	5,026.3	14.9	14.9	-105.08	-136.0	715.2	339.1	309.8	29.32	11.566	
5,200.0	5,148.7	5,187.8	5,125.2	15.2	15.0	-107.47	-136.0	715.2	343.4	313.8	29.55	11.622	
5,300.0	5,247.6	5,286.7	5,224.1	15.5	15.1	-109.81	-136.0	715.2	348.2	318.5	29.74	11.708	
5,400.0	5,346.4	5,385.5	5,322.9	15.8	15.2	-112.08	-136.0	715.2	353.7	323.7	29.91	11.822	
5,500.0	5,445.3	5,484.4	5,421.8	16.1	15.3	-114.28	-136.0	715.2	359.6	329.6	30.06	11.962	
5,600.0	5,544.2	5,583.2	5,520.7	16.5	15.4	-116.41	-136.0	715.2	366.1	335.9	30.20	12.125	
5,700.0	5,643.0	5,682.1	5,619.5	16.8	15.5	-118.46	-136.0	715.2	373.1	342.8	30.31	12.309	
5,800.0	5,741.9	5,781.0	5,718.4	17.1	15.6	-120.43	-136.0	715.2	380.6	350.2	30.42	12.512	
5,900.0	5,840.7	5,879.8	5,817.2	17.4	15.8	-122.33	-136.0	715.2	388.5	358.0	30.51	12.731	
6,000.0	5,939.6	5,978.7	5,916.1	17.7	15.9	-124.15	-136.0	715.2	396.8	366.2	30.60	12.966	
6,100.0	6,038.5	6,077.6	6,015.0	18.0	16.0	-125.89	-136.0	715.2	405.5	374.8	30.69	13.213	
6,200.0	6,137.3	6,176.4	6,113.8	18.4	16.1	-127.56	-136.0	715.2	414.5	383.8	30.77	13.472	
6,300.0	6,236.2	6,275.3	6,212.7	18.7	16.2	-129.16	-136.0	715.2	423.9	393.1	30.86	13.740	
6,400.0	6,335.1	6,374.1	6,311.6	19.0	16.3	-130.69	-136.0	715.2	433.7	402.7	30.94	14.016	
6,500.0	6,433.9	6,473.0	6,410.4	19.3	16.5	-132.16	-136.0	715.2	443.7	412.6	31.03	14.298	
6,600.0	6,532.8	6,571.9	6,509.3	19.6	16.6	-133.56	-136.0	715.2	454.0	422.8	31.12	14.586	
6,700.0	6,631.7	6,670.7	6,608.2	19.9	16.7	-134.89	-136.0	715.2	464.5	433.3	31.22	14.879	
6,800.0	6,730.5	6,769.6	6,707.0	20.3	16.8	-136.17	-136.0	715.2	475.3	444.0	31.32	15.174	
6,900.0	6,829.4	6,868.5	6,805.9	20.6	16.9	-137.39	-136.0	715.2	486.3	454.9	31.43	15.471	
6,981.6	6,910.1	6,949.2	6,886.6	20.8	17.0	-138.35	-136.0	715.2	495.5	463.9	31.53	15.715	
7,000.0	6,928.3	6,967.3	6,904.8	20.9	17.1	-133.70	-136.0	715.2	497.4	465.8	31.56	15.762	
7,100.0	7,027.5	7,066.6	7,004.0	21.1	17.2	-96.77	-136.0	715.2	502.9	471.3	31.59	15.921	
7,200.0	7,126.7	7,165.8	7,103.2	21.2	17.3	-61.06	-136.0	715.2	500.1	468.7	31.40	15.928	
7,300.0	7,225.2	7,264.3	7,201.7	21.3	17.4	-43.85	-136.0	715.2	489.0	458.0	30.98	15.786	
7,400.0	7,322.1	7,361.2	7,298.6	21.3	17.6	-36.61	-136.0	715.2	469.8	439.5	30.33	15.493	
7,500.0	7,416.8	7,455.8	7,393.3	21.2	17.7	-34.00	-136.0	715.2	443.0	413.6	29.46	15.039	
7,600.0	7,508.4	7,547.5	7,484.9	21.1	17.8	-34.19	-136.0	715.2	409.1	380.7	28.40	14.403	
7,700.0	7,596.4	7,635.5	7,572.9	21.0	17.9	-36.67	-136.0	715.2	368.8	341.5	27.24	13.537	
7,800.0	7,680.0	7,712.6	7,650.0	20.8	18.0	-41.11	-136.0	715.2	323.5	297.3	26.20	12.345	
7,900.0	7,758.7	7,712.6	7,650.0	20.7	18.0	-40.92	-136.0	715.2	288.0	262.4	25.65	11.231	
7,986.9	7,822.5	7,712.6	7,650.0	20.6	18.0	-40.41	-136.0	715.2	277.4	252.2	25.21	11.007	ES, SF
7,989.6	7,824.4	7,712.6	7,650.0	20.6	18.0	-40.39	-136.0	715.2	277.5	252.3	25.19	11.013	
8,000.0	7,831.7	7,712.6	7,650.0	20.6	18.0	-40.26	-136.0	715.2	277.7	252.6	25.08	11.073	
8,050.0	7,865.3	7,712.6	7,650.0	20.6	18.0	-39.53	-136.0	715.2	282.3	257.8	24.52	11.513	
8,100.0	7,896.2	7,712.6	7,650.0	20.5	18.0	-38.66	-136.0	715.2	292.6	268.6	23.95	12.215	
8,150.0	7,924.4	7,712.6	7,650.0	20.5	18.0	-37.64	-136.0	715.2	307.9	284.5	23.37	13.173	
8,200.0	7,949.6	7,712.6	7,650.0	20.5	18.0	-36.49	-136.0	715.2	327.6	304.8	22.79	14.373	
8,250.0	7,971.8	7,712.6	7,650.0	20.6	18.0	-35.24	-136.0	715.2	350.7	328.5	22.21	15.792	
8,300.0	7,990.8	7,712.6	7,650.0	20.6	18.0	-33.92	-136.0	715.2	376.5	354.9	21.64	17.403	
8,350.0	8,006.6	7,712.6	7,650.0	20.7	18.0	-32.56	-136.0	715.2	404.5	383.4	21.10	19.167	
8,400.0	8,019.1	7,712.6	7,650.0	20.8	18.0	-31.19	-136.0	715.2	434.0	413.4	20.64	21.032	
8,450.0	8,028.1	7,712.6	7,650.0	21.0	18.0	-29.83	-136.0	715.2	464.7	444.4	20.26	22.932	
8,500.0	8,033.7	7,712.6	7,650.0	21.1	18.0	-28.52	-136.0	715.2	496.2	476.2	20.02	24.785	
8,550.0	8,035.9	7,712.6	7,650.0	21.3	18.0	-27.28	-136.0	715.2	528.2	508.2	19.93	26.503	
8,556.4	8,036.0	7,712.6	7,650.0	21.4	18.0	-27.12	-136.0	715.2	532.2	512.3	19.93	26.707	
8,600.0	8,036.0	7,712.6	7,650.0	21.6	18.0	-27.12	-136.0	715.2	561.3	541.2	20.11	27.919	
8,700.0	8,036.0	7,712.6	7,650.0	22.2	18.0	-27.12	-136.0	715.2	634.3	613.8	20.54	30.875	
8,800.0	8,036.0	7,712.6	7,650.0	22.9	18.0	-27.12	-136.0	715.2	713.9	692.9	21.02	33.955	
8,900.0	8,036.0	7,712.6	7,650.0	23.7	18.0	-27.12	-136.0	715.2	798.1	776.5	21.54	37.049	
9,000.0	8,036.0	7,712.6	7,650.0	24.6	18.0	-27.12	-136.0	715.2	885.5	863.4	22.09	40.089	
9,100.0	8,036.0	7,712.6	7,650.0	25.6	18.0	-27.12	-136.0	715.2	975.4	952.8	22.67	43.036	

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:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - WILLIAM H PELTIER 1 (EXISTING) - VESSELS WELL - N

Offset Site Error: 0.0 ft

Survey Program: 8517-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
16,400.0	8,036.0	8,017.5	8,017.5	144.7	14.0	-90.00	8,628.6	17.9	963.1	805.1	157.93	6.098	
16,500.0	8,036.0	8,017.5	8,017.5	146.4	14.0	-90.00	8,628.6	17.9	905.6	745.9	159.68	5.671	
16,600.0	8,036.0	8,017.5	8,017.5	148.2	14.0	-90.00	8,628.6	17.9	856.0	694.6	161.42	5.303	
16,700.0	8,036.0	8,017.5	8,017.5	149.9	14.0	-90.00	8,628.6	17.9	815.7	652.5	163.17	4.999	
16,800.0	8,036.0	8,017.5	8,017.5	151.6	14.0	-90.00	8,628.6	17.9	786.1	621.2	164.92	4.767	
16,900.0	8,036.0	8,017.5	8,017.5	153.4	14.0	-90.00	8,628.6	17.9	768.5	601.8	166.66	4.611	
16,986.9	8,036.0	8,017.5	8,017.5	154.9	14.0	-90.00	8,628.6	17.9	763.5	595.4	168.18	4.540	CC
17,000.0	8,036.0	8,017.5	8,017.5	155.1	14.0	-90.00	8,628.6	17.9	763.6	595.2	168.41	4.534	ES, SF
17,100.0	8,036.0	8,017.5	8,017.5	156.9	14.0	-90.00	8,628.6	17.9	771.9	601.7	170.15	4.536	
17,200.0	8,036.0	8,017.5	8,017.5	158.6	14.0	-90.00	8,628.6	17.9	792.7	620.8	171.90	4.611	
17,300.0	8,036.0	8,017.5	8,017.5	160.3	14.0	-90.00	8,628.6	17.9	825.2	651.6	173.65	4.752	
17,400.0	8,036.0	8,017.5	8,017.5	162.1	14.0	-90.00	8,628.6	17.9	868.1	692.7	175.40	4.949	
17,500.0	8,036.0	8,017.5	8,017.5	163.8	14.0	-90.00	8,628.6	17.9	919.9	742.8	177.14	5.193	
17,600.0	8,036.0	8,017.5	8,017.5	165.6	14.0	-90.00	8,628.6	17.9	979.2	800.3	178.89	5.474	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WELL

Offset Site Error: 0.0 ft

Survey Program: 911-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
16,500.0	8,036.0	8,066.7	7,696.3	146.4	15.7	-26.30	9,051.3	622.4	965.5	886.4	79.09	12.207	
16,600.0	8,036.0	8,053.4	7,694.6	148.2	15.6	-24.21	9,053.1	635.5	872.7	797.4	75.31	11.589	
16,700.0	8,036.0	8,040.8	7,693.0	149.9	15.4	-22.18	9,054.8	647.8	781.6	710.1	71.55	10.925	
16,800.0	8,036.0	8,028.9	7,691.3	151.6	15.3	-20.22	9,056.3	659.6	692.8	624.9	67.85	10.211	
16,900.0	8,036.0	8,018.3	7,689.8	153.4	15.2	-18.45	9,057.7	670.0	607.1	542.6	64.51	9.411	
17,000.0	8,036.0	8,012.0	7,688.9	155.1	15.1	-17.40	9,058.5	676.1	526.4	463.7	62.74	8.390	
17,100.0	8,036.0	8,001.2	7,687.2	156.9	15.0	-15.56	9,059.9	686.7	453.2	394.0	59.20	7.654	
17,200.0	8,036.0	7,992.8	7,685.8	158.6	15.0	-14.13	9,061.0	694.9	391.7	335.2	56.56	6.926	
17,300.0	8,036.0	7,980.0	7,683.6	160.3	14.9	-11.92	9,062.7	707.4	348.4	296.0	52.33	6.657	
17,400.0	8,036.0	7,975.3	7,682.7	162.1	14.8	-11.11	9,063.3	712.0	330.2	279.1	51.07	6.466	ES, SF
17,412.3	8,036.0	7,974.2	7,682.5	162.3	14.8	-10.92	9,063.4	713.1	330.0	279.2	50.73	6.505	CC
17,500.0	8,036.0	7,966.2	7,681.0	163.8	14.8	-9.54	9,064.5	720.8	341.3	293.0	48.35	7.059	
17,600.0	8,036.0	7,957.0	7,679.1	165.6	14.7	-7.96	9,065.8	729.8	379.1	333.3	45.80	8.278	
17,700.0	8,036.0	7,949.0	7,677.5	167.3	14.6	-6.59	9,066.8	737.5	436.8	392.9	43.84	9.962	
17,800.0	8,036.0	7,938.1	7,675.0	169.0	14.6	-4.73	9,068.4	748.1	507.5	466.0	41.52	12.224	
17,826.5	8,036.0	7,935.4	7,674.4	169.5	14.5	-4.28	9,068.8	750.7	527.8	486.7	41.04	12.859	
17,827.1	8,036.0	7,935.3	7,674.4	169.5	14.5	-4.27	9,068.8	750.8	528.2	487.2	41.03	12.873	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Site S29-T1N-R68W (Pratt/Waste Connections
Project:	DJ Wattenberg	**TVD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	28.5' KB @ 5204.5ft (Patterson 272)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4G-29H-P168	**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 #3	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to 28.5' KB @ 5204.5ft (Patterson 272)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: S29-T1N-R68W (Pratt/Waste Connections)
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.31°