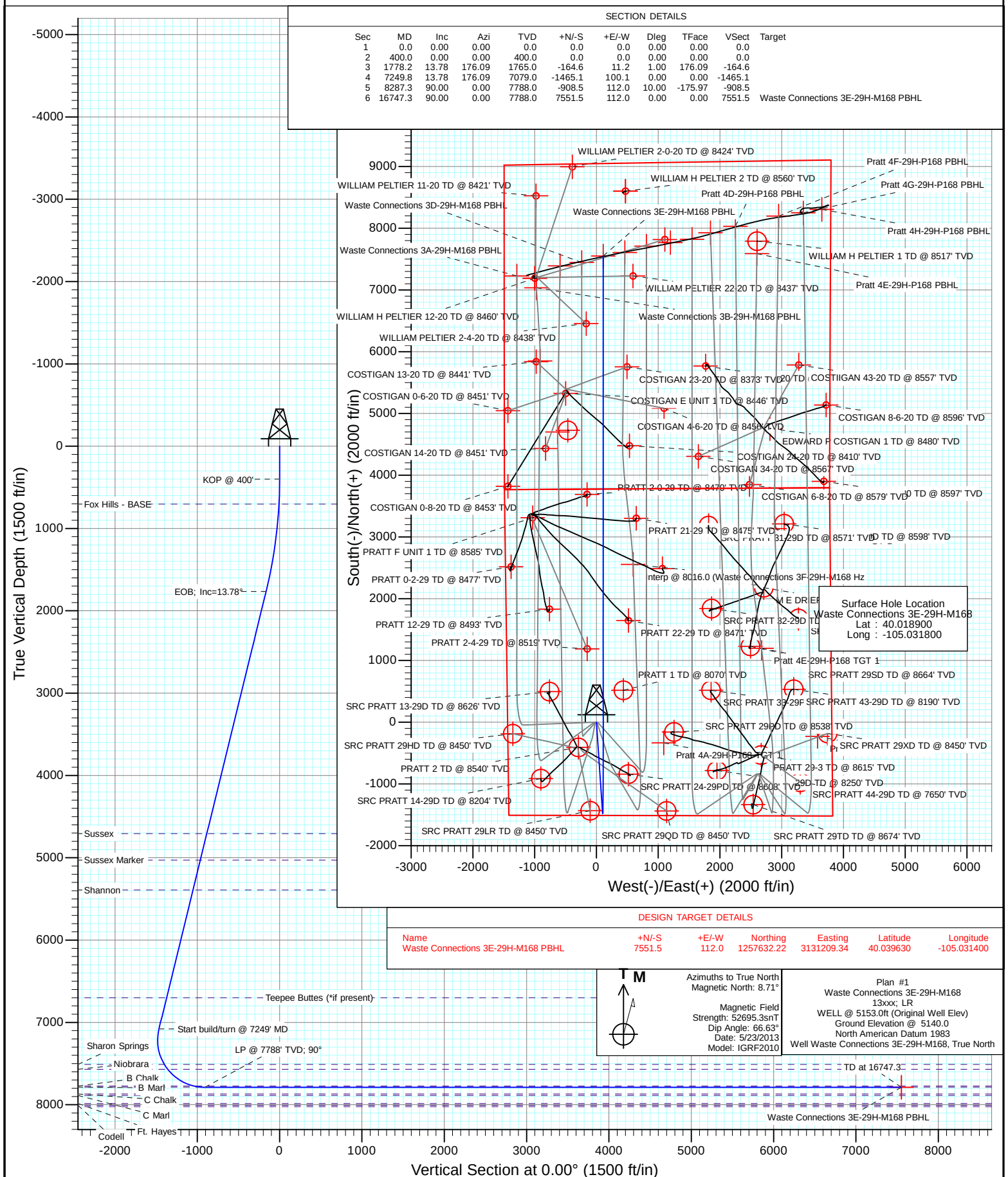
Project: DJ Wattenberg
Site: S29-T1N-R68W (Pratt/Waste Connections)
Well: Waste Connections 3E-29H-M168
Wellbore: Hz
Design: Plan #1

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1778.2	13.78	176.09	1765.0	-164.6	11.2	1.00	176.09	-164.6	
4	7249.8	13.78	176.09	7079.0	-1465.1	100.1	0.00	0.00	-1465.1	
5	8287.3	90.00	0.00	7788.0	-908.5	112.0	10.00	-175.97	-908.5	
6	16747.3	90.00	0.00	7788.0	7551.5	112.0	0.00	0.00	7551.5	Waste Connections 3E-29H-M168 PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Waste Connections 3E-29H-M168 PBHL	7551.5	112.0	1257632.22	3131209.34	40.039630	-105.031400

Azimuths to True North
Magnetic North: 8.71°

Magnetic Field
Strength: 52695.3snT
Dip Angle: 66.63°
Date: 5/23/2013
Model: IGRF2010

Plan #1
Waste Connections 3E-29H-M168
13xxx; LR
WELL @ 5153.0ft (Original Well Elev)
Ground Elevation @ 5140.0
North American Datum 1983
Well Waste Connections 3E-29H-M168, True North

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Project	DJ Wattenberg		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	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	Waste Connections 3E-29H-M168				
Well Position	**+N/-S**	0.0 ft	**Northing:**	1,250,080.26 ft	**Latitude:**	40.018900
	+E/-W	0.0 ft	**Easting:**	3,131,137.21 ft	**Longitude:**	-105.031800
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,140.0 ft

Wellbore	Hz			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	5/23/2013	8.71	66.63	52,695

Design	Plan #1			
Audit Notes:				
Version:	**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**
	0.0	0.0	0.0	0.00

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,778.2	13.78	176.09	1,765.0	-164.6	11.2	1.00	1.00	0.00	176.09	
7,249.8	13.78	176.09	7,079.0	-1,465.1	100.1	0.00	0.00	0.00	0.00	
8,287.3	90.00	0.00	7,788.0	-908.5	112.0	10.00	7.35	-16.97	-175.97	
16,747.3	90.00	0.00	7,788.0	7,551.5	112.0	0.00	0.00	0.00	0.00	Waste Connections 3I

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	1.00	176.09	500.0	-0.9	0.1	-0.9	1.00	1.00	
600.0	2.00	176.09	600.0	-3.5	0.2	-3.5	1.00	1.00	
700.0	3.00	176.09	699.9	-7.8	0.5	-7.8	1.00	1.00	
703.1	3.03	176.09	703.0	-8.0	0.5	-8.0	1.00	1.00	Fox Hills - BASE
800.0	4.00	176.09	799.7	-13.9	1.0	-13.9	1.00	1.00	
900.0	5.00	176.09	899.4	-21.8	1.5	-21.8	1.00	1.00	
1,000.0	6.00	176.09	998.9	-31.3	2.1	-31.3	1.00	1.00	
1,100.0	7.00	176.09	1,098.3	-42.6	2.9	-42.6	1.00	1.00	
1,200.0	8.00	176.09	1,197.4	-55.6	3.8	-55.6	1.00	1.00	
1,300.0	9.00	176.09	1,296.3	-70.4	4.8	-70.4	1.00	1.00	
1,400.0	10.00	176.09	1,394.9	-86.8	5.9	-86.8	1.00	1.00	
1,500.0	11.00	176.09	1,493.3	-105.0	7.2	-105.0	1.00	1.00	
1,600.0	12.00	176.09	1,591.2	-124.9	8.5	-124.9	1.00	1.00	
1,700.0	13.00	176.09	1,688.9	-146.5	10.0	-146.5	1.00	1.00	
1,778.2	13.78	176.09	1,765.0	-164.6	11.2	-164.6	1.00	1.00	EOB; Inc=13.78°
1,800.0	13.78	176.09	1,786.1	-169.8	11.6	-169.8	0.00	0.00	
1,900.0	13.78	176.09	1,883.2	-193.5	13.2	-193.5	0.00	0.00	
2,000.0	13.78	176.09	1,980.4	-217.3	14.9	-217.3	0.00	0.00	
2,100.0	13.78	176.09	2,077.5	-241.1	16.5	-241.1	0.00	0.00	
2,200.0	13.78	176.09	2,174.6	-264.8	18.1	-264.8	0.00	0.00	
2,300.0	13.78	176.09	2,271.7	-288.6	19.7	-288.6	0.00	0.00	
2,400.0	13.78	176.09	2,368.8	-312.4	21.4	-312.4	0.00	0.00	
2,500.0	13.78	176.09	2,466.0	-336.1	23.0	-336.1	0.00	0.00	
2,600.0	13.78	176.09	2,563.1	-359.9	24.6	-359.9	0.00	0.00	
2,700.0	13.78	176.09	2,660.2	-383.7	26.2	-383.7	0.00	0.00	
2,800.0	13.78	176.09	2,757.3	-407.4	27.8	-407.4	0.00	0.00	
2,900.0	13.78	176.09	2,854.4	-431.2	29.5	-431.2	0.00	0.00	
3,000.0	13.78	176.09	2,951.6	-455.0	31.1	-455.0	0.00	0.00	
3,100.0	13.78	176.09	3,048.7	-478.7	32.7	-478.7	0.00	0.00	
3,200.0	13.78	176.09	3,145.8	-502.5	34.3	-502.5	0.00	0.00	
3,300.0	13.78	176.09	3,242.9	-526.3	36.0	-526.3	0.00	0.00	
3,400.0	13.78	176.09	3,340.1	-550.0	37.6	-550.0	0.00	0.00	
3,500.0	13.78	176.09	3,437.2	-573.8	39.2	-573.8	0.00	0.00	
3,600.0	13.78	176.09	3,534.3	-597.6	40.8	-597.6	0.00	0.00	
3,700.0	13.78	176.09	3,631.4	-621.4	42.5	-621.4	0.00	0.00	
3,800.0	13.78	176.09	3,728.5	-645.1	44.1	-645.1	0.00	0.00	
3,900.0	13.78	176.09	3,825.7	-668.9	45.7	-668.9	0.00	0.00	
4,000.0	13.78	176.09	3,922.8	-692.7	47.3	-692.7	0.00	0.00	
4,100.0	13.78	176.09	4,019.9	-716.4	49.0	-716.4	0.00	0.00	
4,200.0	13.78	176.09	4,117.0	-740.2	50.6	-740.2	0.00	0.00	
4,300.0	13.78	176.09	4,214.1	-764.0	52.2	-764.0	0.00	0.00	
4,400.0	13.78	176.09	4,311.3	-787.7	53.8	-787.7	0.00	0.00	
4,500.0	13.78	176.09	4,408.4	-811.5	55.5	-811.5	0.00	0.00	
4,600.0	13.78	176.09	4,505.5	-835.3	57.1	-835.3	0.00	0.00	
4,700.0	13.78	176.09	4,602.6	-859.0	58.7	-859.0	0.00	0.00	
4,800.0	13.78	176.09	4,699.7	-882.8	60.3	-882.8	0.00	0.00	
4,806.4	13.78	176.09	4,706.0	-884.3	60.4	-884.3	0.00	0.00	Sussex

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,900.0	13.78	176.09	4,796.9	-906.6	62.0	-906.6	0.00	0.00	
5,000.0	13.78	176.09	4,894.0	-930.3	63.6	-930.3	0.00	0.00	
5,100.0	13.78	176.09	4,991.1	-954.1	65.2	-954.1	0.00	0.00	
5,138.0	13.78	176.09	5,028.0	-963.1	65.8	-963.1	0.00	0.00	Sussex Marker
5,200.0	13.78	176.09	5,088.2	-977.9	66.8	-977.9	0.00	0.00	
5,300.0	13.78	176.09	5,185.3	-1,001.6	68.5	-1,001.6	0.00	0.00	
5,400.0	13.78	176.09	5,282.5	-1,025.4	70.1	-1,025.4	0.00	0.00	
5,500.0	13.78	176.09	5,379.6	-1,049.2	71.7	-1,049.2	0.00	0.00	
5,511.8	13.78	176.09	5,391.0	-1,052.0	71.9	-1,052.0	0.00	0.00	Shannon
5,600.0	13.78	176.09	5,476.7	-1,072.9	73.3	-1,072.9	0.00	0.00	
5,700.0	13.78	176.09	5,573.8	-1,096.7	75.0	-1,096.7	0.00	0.00	
5,800.0	13.78	176.09	5,670.9	-1,120.5	76.6	-1,120.5	0.00	0.00	
5,900.0	13.78	176.09	5,768.1	-1,144.3	78.2	-1,144.3	0.00	0.00	
6,000.0	13.78	176.09	5,865.2	-1,168.0	79.8	-1,168.0	0.00	0.00	
6,100.0	13.78	176.09	5,962.3	-1,191.8	81.5	-1,191.8	0.00	0.00	
6,200.0	13.78	176.09	6,059.4	-1,215.6	83.1	-1,215.6	0.00	0.00	
6,300.0	13.78	176.09	6,156.6	-1,239.3	84.7	-1,239.3	0.00	0.00	
6,400.0	13.78	176.09	6,253.7	-1,263.1	86.3	-1,263.1	0.00	0.00	
6,500.0	13.78	176.09	6,350.8	-1,286.9	88.0	-1,286.9	0.00	0.00	
6,600.0	13.78	176.09	6,447.9	-1,310.6	89.6	-1,310.6	0.00	0.00	
6,700.0	13.78	176.09	6,545.0	-1,334.4	91.2	-1,334.4	0.00	0.00	
6,800.0	13.78	176.09	6,642.2	-1,358.2	92.8	-1,358.2	0.00	0.00	
6,859.6	13.78	176.09	6,700.0	-1,372.3	93.8	-1,372.3	0.00	0.00	Teepee Buttes (*if present)
6,900.0	13.78	176.09	6,739.3	-1,381.9	94.5	-1,381.9	0.00	0.00	
7,000.0	13.78	176.09	6,836.4	-1,405.7	96.1	-1,405.7	0.00	0.00	
7,100.0	13.78	176.09	6,933.5	-1,429.5	97.7	-1,429.5	0.00	0.00	
7,200.0	13.78	176.09	7,030.6	-1,453.2	99.3	-1,453.2	0.00	0.00	
7,249.8	13.78	176.09	7,079.0	-1,465.1	100.1	-1,465.1	0.00	0.00	Start build/turn @ 7249' MD
7,300.0	8.78	173.78	7,128.2	-1,474.9	101.0	-1,474.9	10.00	-9.96	
7,400.0	1.59	36.92	7,227.9	-1,481.3	102.6	-1,481.3	10.00	-7.18	
7,500.0	11.32	4.80	7,327.1	-1,470.4	104.3	-1,470.4	10.00	9.72	
7,600.0	21.30	2.46	7,423.0	-1,442.4	105.9	-1,442.4	10.00	9.98	
7,697.0	30.99	1.60	7,510.0	-1,399.7	107.3	-1,399.7	10.00	9.99	Sharon Springs
7,700.0	31.29	1.58	7,512.5	-1,398.2	107.4	-1,398.2	10.00	9.99	
7,767.5	38.03	1.23	7,568.0	-1,359.9	108.3	-1,359.9	10.00	10.00	Niobrara
7,800.0	41.28	1.09	7,593.0	-1,339.1	108.7	-1,339.1	10.00	10.00	
7,900.0	51.28	0.77	7,662.1	-1,267.0	109.9	-1,267.0	10.00	10.00	
8,000.0	61.28	0.53	7,717.5	-1,183.9	110.8	-1,183.9	10.00	10.00	
8,100.0	71.28	0.32	7,757.7	-1,092.5	111.5	-1,092.5	10.00	10.00	
8,155.8	76.86	0.22	7,773.0	-1,038.8	111.7	-1,038.8	10.00	10.00	B Chalk
8,200.0	81.28	0.15	7,781.4	-995.4	111.9	-995.4	10.00	10.00	
8,219.5	83.23	0.11	7,784.0	-976.1	111.9	-976.1	10.00	10.00	B Marl
8,287.3	90.00	0.00	7,788.0	-908.5	112.0	-908.5	10.00	10.00	LP @ 7788' TVD; 90°
8,300.0	90.00	0.00	7,788.0	-895.8	112.0	-895.8	0.00	0.00	
8,400.0	90.00	0.00	7,788.0	-795.8	112.0	-795.8	0.00	0.00	
8,500.0	90.00	0.00	7,788.0	-695.8	112.0	-695.8	0.00	0.00	
8,600.0	90.00	0.00	7,788.0	-595.8	112.0	-595.8	0.00	0.00	
8,700.0	90.00	0.00	7,788.0	-495.8	112.0	-495.8	0.00	0.00	
8,800.0	90.00	0.00	7,788.0	-395.8	112.0	-395.8	0.00	0.00	
8,900.0	90.00	0.00	7,788.0	-295.8	112.0	-295.8	0.00	0.00	
9,000.0	90.00	0.00	7,788.0	-195.8	112.0	-195.8	0.00	0.00	
9,100.0	90.00	0.00	7,788.0	-95.8	112.0	-95.8	0.00	0.00	

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Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,200.0	90.00	0.00	7,788.0	4.2	112.0	4.2	0.00	0.00	
9,300.0	90.00	0.00	7,788.0	104.2	112.0	104.2	0.00	0.00	
9,400.0	90.00	0.00	7,788.0	204.2	112.0	204.2	0.00	0.00	
9,500.0	90.00	0.00	7,788.0	304.2	112.0	304.2	0.00	0.00	
9,600.0	90.00	0.00	7,788.0	404.2	112.0	404.2	0.00	0.00	
9,700.0	90.00	0.00	7,788.0	504.2	112.0	504.2	0.00	0.00	
9,800.0	90.00	0.00	7,788.0	604.2	112.0	604.2	0.00	0.00	
9,900.0	90.00	0.00	7,788.0	704.2	112.0	704.2	0.00	0.00	
10,000.0	90.00	0.00	7,788.0	804.2	112.0	804.2	0.00	0.00	
10,100.0	90.00	0.00	7,788.0	904.2	112.0	904.2	0.00	0.00	
10,200.0	90.00	0.00	7,788.0	1,004.2	112.0	1,004.2	0.00	0.00	
10,300.0	90.00	0.00	7,788.0	1,104.2	112.0	1,104.2	0.00	0.00	
10,400.0	90.00	0.00	7,788.0	1,204.2	112.0	1,204.2	0.00	0.00	
10,500.0	90.00	0.00	7,788.0	1,304.2	112.0	1,304.2	0.00	0.00	
10,600.0	90.00	0.00	7,788.0	1,404.2	112.0	1,404.2	0.00	0.00	
10,700.0	90.00	0.00	7,788.0	1,504.2	112.0	1,504.2	0.00	0.00	
10,800.0	90.00	0.00	7,788.0	1,604.2	112.0	1,604.2	0.00	0.00	
10,900.0	90.00	0.00	7,788.0	1,704.2	112.0	1,704.2	0.00	0.00	
11,000.0	90.00	0.00	7,788.0	1,804.2	112.0	1,804.2	0.00	0.00	
11,100.0	90.00	0.00	7,788.0	1,904.2	112.0	1,904.2	0.00	0.00	
11,200.0	90.00	0.00	7,788.0	2,004.2	112.0	2,004.2	0.00	0.00	
11,300.0	90.00	0.00	7,788.0	2,104.2	112.0	2,104.2	0.00	0.00	
11,400.0	90.00	0.00	7,788.0	2,204.2	112.0	2,204.2	0.00	0.00	
11,500.0	90.00	0.00	7,788.0	2,304.2	112.0	2,304.2	0.00	0.00	
11,600.0	90.00	0.00	7,788.0	2,404.2	112.0	2,404.2	0.00	0.00	
11,700.0	90.00	0.00	7,788.0	2,504.2	112.0	2,504.2	0.00	0.00	
11,800.0	90.00	0.00	7,788.0	2,604.2	112.0	2,604.2	0.00	0.00	
11,900.0	90.00	0.00	7,788.0	2,704.2	112.0	2,704.2	0.00	0.00	
12,000.0	90.00	0.00	7,788.0	2,804.2	112.0	2,804.2	0.00	0.00	
12,100.0	90.00	0.00	7,788.0	2,904.2	112.0	2,904.2	0.00	0.00	
12,200.0	90.00	0.00	7,788.0	3,004.2	112.0	3,004.2	0.00	0.00	
12,300.0	90.00	0.00	7,788.0	3,104.2	112.0	3,104.2	0.00	0.00	
12,400.0	90.00	0.00	7,788.0	3,204.2	112.0	3,204.2	0.00	0.00	
12,500.0	90.00	0.00	7,788.0	3,304.2	112.0	3,304.2	0.00	0.00	
12,600.0	90.00	0.00	7,788.0	3,404.2	112.0	3,404.2	0.00	0.00	
12,700.0	90.00	0.00	7,788.0	3,504.2	112.0	3,504.2	0.00	0.00	
12,800.0	90.00	0.00	7,788.0	3,604.2	112.0	3,604.2	0.00	0.00	
12,900.0	90.00	0.00	7,788.0	3,704.2	112.0	3,704.2	0.00	0.00	
13,000.0	90.00	0.00	7,788.0	3,804.2	112.0	3,804.2	0.00	0.00	
13,100.0	90.00	0.00	7,788.0	3,904.2	112.0	3,904.2	0.00	0.00	
13,200.0	90.00	0.00	7,788.0	4,004.2	112.0	4,004.2	0.00	0.00	
13,300.0	90.00	0.00	7,788.0	4,104.2	112.0	4,104.2	0.00	0.00	
13,400.0	90.00	0.00	7,788.0	4,204.2	112.0	4,204.2	0.00	0.00	
13,500.0	90.00	0.00	7,788.0	4,304.2	112.0	4,304.2	0.00	0.00	
13,600.0	90.00	0.00	7,788.0	4,404.2	112.0	4,404.2	0.00	0.00	
13,700.0	90.00	0.00	7,788.0	4,504.2	112.0	4,504.2	0.00	0.00	
13,800.0	90.00	0.00	7,788.0	4,604.2	112.0	4,604.2	0.00	0.00	
13,900.0	90.00	0.00	7,788.0	4,704.2	112.0	4,704.2	0.00	0.00	
14,000.0	90.00	0.00	7,788.0	4,804.2	112.0	4,804.2	0.00	0.00	
14,100.0	90.00	0.00	7,788.0	4,904.2	112.0	4,904.2	0.00	0.00	
14,200.0	90.00	0.00	7,788.0	5,004.2	112.0	5,004.2	0.00	0.00	
14,300.0	90.00	0.00	7,788.0	5,104.2	112.0	5,104.2	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
14,400.0	90.00	0.00	7,788.0	5,204.2	112.0	5,204.2	0.00	0.00	
14,500.0	90.00	0.00	7,788.0	5,304.2	112.0	5,304.2	0.00	0.00	
14,600.0	90.00	0.00	7,788.0	5,404.2	112.0	5,404.2	0.00	0.00	
14,700.0	90.00	0.00	7,788.0	5,504.2	112.0	5,504.2	0.00	0.00	
14,800.0	90.00	0.00	7,788.0	5,604.2	112.0	5,604.2	0.00	0.00	
14,900.0	90.00	0.00	7,788.0	5,704.2	112.0	5,704.2	0.00	0.00	
15,000.0	90.00	0.00	7,788.0	5,804.2	112.0	5,804.2	0.00	0.00	
15,100.0	90.00	0.00	7,788.0	5,904.2	112.0	5,904.2	0.00	0.00	
15,200.0	90.00	0.00	7,788.0	6,004.2	112.0	6,004.2	0.00	0.00	
15,300.0	90.00	0.00	7,788.0	6,104.2	112.0	6,104.2	0.00	0.00	
15,400.0	90.00	0.00	7,788.0	6,204.2	112.0	6,204.2	0.00	0.00	
15,500.0	90.00	0.00	7,788.0	6,304.2	112.0	6,304.2	0.00	0.00	
15,600.0	90.00	0.00	7,788.0	6,404.2	112.0	6,404.2	0.00	0.00	
15,700.0	90.00	0.00	7,788.0	6,504.2	112.0	6,504.2	0.00	0.00	
15,800.0	90.00	0.00	7,788.0	6,604.2	112.0	6,604.2	0.00	0.00	
15,900.0	90.00	0.00	7,788.0	6,704.2	112.0	6,704.2	0.00	0.00	
16,000.0	90.00	0.00	7,788.0	6,804.2	112.0	6,804.2	0.00	0.00	
16,100.0	90.00	0.00	7,788.0	6,904.2	112.0	6,904.2	0.00	0.00	
16,200.0	90.00	0.00	7,788.0	7,004.2	112.0	7,004.2	0.00	0.00	
16,300.0	90.00	0.00	7,788.0	7,104.2	112.0	7,104.2	0.00	0.00	
16,400.0	90.00	0.00	7,788.0	7,204.2	112.0	7,204.2	0.00	0.00	
16,500.0	90.00	0.00	7,788.0	7,304.2	112.0	7,304.2	0.00	0.00	
16,600.0	90.00	0.00	7,788.0	7,404.2	112.0	7,404.2	0.00	0.00	
16,700.0	90.00	0.00	7,788.0	7,504.2	112.0	7,504.2	0.00	0.00	
16,747.3	90.00	0.00	7,788.0	7,551.5	112.0	7,551.5	0.00	0.00	TD at 16747.3 - Waste Connections 3E-29H-M1

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
Waste Connections 3E-2 - plan hits target center - Point	0.00	0.00	7,788.0	7,551.5	112.0	1,257,632.22	3,131,209.34	40.039630	-105.031400

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
703.1	703.0	Fox Hills - BASE			
4,806.4	4,706.0	Sussex			
5,138.0	5,028.0	Sussex Marker			
5,511.8	5,391.0	Shannon			
6,859.6	6,700.0	Teepee Buttes (*if present)			
7,697.0	7,510.0	Sharon Springs			
7,767.5	7,568.0	Niobrara			
8,155.8	7,773.0	B Chalk			
8,219.5	7,784.0	B Marl			

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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	0.0	KOP @ 400'
1,778.2	1,765.0	-164.6	11.2	EOB; Inc=13.78°
7,249.8	7,079.0	-1,465.1	100.1	Start build/turn @ 7249' MD
8,287.3	7,788.0	-908.5	112.0	LP @ 7788' TVD; 90°
16,747.3	7,788.0	7,551.5	112.0	TD at 16747.3

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S29-T1N-R68W (Pratt/Waste Connections)
Waste Connections 3E-29H-M168
Hz
Plan #1

Anticollision Report

30 May, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference	Plan #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 5/30/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	16,747.3	Plan #1 (Hz)	MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
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	14,951.4	7,813.5	383.6	264.5	3.221	CC, ES, SF
COSTIGAN 24-20 (EXISTING) - ENCANA WELL - ENCA	13,666.9	7,944.0	412.2	309.3	4.006	CC, ES
COSTIGAN 24-20 (EXISTING) - ENCANA WELL - ENCA	13,700.0	7,944.2	413.5	310.1	3.997	SF
COSTIGAN 33-20 (EXISTING) - ENCANA WELL - ENCA						Out of range
COSTIGAN 34-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 43-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 4-6-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 6-8-20 (EXISTING) - ENCANA WELL - PLAN						Out of range
COSTIGAN 8-6-20 (EXISTING) - ENCANA WELL - SUR						Out of range
COSTIGAN 8-8-20 (EXISTING) - ENCANA WELL - SUR						Out of range
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						Out of range
M E DRIER 1 (EXISTING) - SYNERGY WELL - NO SUR						Out of range
PRATT 0-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
PRATT 1 (EXISTING) - SYNERGY WELL - NO SURVEY	9,712.4	7,777.0	325.2	292.3	9.879	CC, ES, SF
PRATT 12-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 2 (EXISTING) - SYNERGY WELL - NO SURVEY	2,710.8	2,658.7	318.4	305.4	24.408	CC, ES
PRATT 2 (EXISTING) - SYNERGY WELL - NO SURVEY	8,787.8	7,776.0	403.3	372.9	13.294	SF
PRATT 2-0-29 (EXISTING) - ENCANA WELL - SURVEY	12,877.5	7,864.4	274.2	191.0	3.297	CC, ES
PRATT 2-0-29 (EXISTING) - ENCANA WELL - SURVEY	12,900.0	7,864.8	275.1	191.5	3.293	SF
PRATT 21-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 22-29 (EXISTING) - ENCANA WELL - SURVEYS	10,862.6	8,343.2	389.9	320.6	5.625	CC, ES
PRATT 22-29 (EXISTING) - ENCANA WELL - SURVEYS	10,900.0	8,342.3	391.7	321.8	5.604	SF
PRATT 2-4-29 (EXISTING) - ENCANA WELL - PLAN ON	10,383.3	8,230.1	260.4	191.7	3.789	CC, ES
PRATT 2-4-29 (EXISTING) - ENCANA WELL - PLAN ON	10,400.0	8,230.1	261.0	192.0	3.784	SF
PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURV						Out of range
PRATT 4-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
Pratt 4B-29H-P168 - Hz - Plan #1						Out of range
Pratt 4C-29H-P168 - Hz - Plan #1						Out of range
Pratt 4D-29H-P168 - Hz - Plan #1						Out of range
Pratt 4E-29H-P168 - Hz - Plan #1						Out of range
Pratt 4F-29H-P168 - Hz - Plan #1						Out of range
Pratt 4G-29H-P168 - Hz - Plan #1						Out of range
PRATT F UNIT 1 (EXISTING) - ENCANA WELL - NO SU						Out of range
SRC PRATT 13-29D (EXISTING) - SYNERGY WELL - S	1,403.5	1,400.3	426.9	419.6	58.734	CC, ES
SRC PRATT 13-29D (EXISTING) - SYNERGY WELL - S	2,000.0	1,939.3	496.7	485.7	45.060	SF
SRC PRATT 14-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 24-29 PD (EXISTING) - SYNERGY WELL -	2,948.8	2,908.7	294.9	281.8	22.468	CC, ES
SRC PRATT 24-29 PD (EXISTING) - SYNERGY WELL -	8,300.0	7,900.2	402.9	366.0	10.928	SF
SRC PRATT 29HD (EXISTING) - SYNERGY WELL - PL						Out of range
SRC PRATT 29LD (EXISTING) - SYNERGY WELL - PLA	7,060.4	7,007.3	198.1	148.3	3.980	CC, ES
SRC PRATT 29LD (EXISTING) - SYNERGY WELL - PLA	7,100.0	7,045.7	198.3	148.4	3.978	SF
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU						Out of range
SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PL	2,086.0	2,009.1	461.1	451.0	45.823	CC
SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PL	2,100.0	2,022.5	461.1	451.0	45.583	ES
SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PL	2,800.0	2,696.7	499.5	487.1	40.189	SF
SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SU						Out of range
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU						Out of range

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S29-T1N-R68W (Pratt/Waste Connections)						
SRC PRATT 29XD (EXISTING) - SYNERGY WELL - PLA						Out of range
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 -						Out of range
SRC PRATT 34-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 41-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 42-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - P						Out of range
Waste Connections 3A-29H-M168 - Hz - Plan #1	200.0	200.0	39.2	38.6	60.070	CC, ES
Waste Connections 3A-29H-M168 - Hz - Plan #1	700.0	695.2	61.7	59.3	25.677	SF
Waste Connections 3B-29H-M168 - Hz - Plan #1	300.0	300.0	30.8	29.8	30.752	CC, ES
Waste Connections 3B-29H-M168 - Hz - Plan #1	700.0	697.8	42.6	40.2	17.595	SF
Waste Connections 3C-29H-M168 - Hz - Plan #1	400.0	400.0	19.6	18.3	14.513	CC
Waste Connections 3C-29H-M168 - Hz - Plan #1	500.0	499.9	19.8	18.1	11.650	ES
Waste Connections 3C-29H-M168 - Hz - Plan #1	1,800.0	1,798.0	60.8	51.9	6.857	SF
Waste Connections 3D-29H-M168 - Hz - Plan #1	400.0	400.0	11.2	9.9	8.293	CC
Waste Connections 3D-29H-M168 - Hz - Plan #1	500.0	500.0	11.3	9.6	6.643	ES
Waste Connections 3D-29H-M168 - Hz - Plan #1	16,624.7	15,433.4	417.7	192.9	1.858	SF
Waste Connections 3F-29H-M168 - Hz - Plan #1	300.0	300.0	8.4	7.4	8.387	CC
Waste Connections 3F-29H-M168 - Hz - Plan #1	400.0	399.9	8.7	7.4	6.447	ES
Waste Connections 3F-29H-M168 - Hz - Plan #1	16,747.3	16,931.1	417.1	188.4	1.824	SF
Waste Connections 3G-29H-M168 - Hz - Plan #1	166.3	167.3	19.6	19.1	36.511	CC
Waste Connections 3G-29H-M168 - Hz - Plan #1	200.0	201.0	19.6	19.0	29.955	ES
Waste Connections 3G-29H-M168 - Hz - Plan #1	700.0	699.0	34.7	32.2	14.230	SF
WILLIAM H PELTIER 1 (EXISTING) - VESSELS WELL -						Out of range
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 1A-20H (EXISTING) - ENCANA WEL	16,737.7	11,239.7	136.3	91.6	3.046	CC, ES, SF
WILLIAM PELTIER 2-0-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 22-20 (EXISTING) - ENCANA WELL	16,423.1	7,927.7	481.6	338.2	3.359	CC, ES, SF
WILLIAM PELTIER 2-4-20 (EXISTING) - ENCANA WELL	15,650.8	7,826.0	277.2	142.0	2.051	CC, ES, SF
WILLIAM PELTIER 4-2-20 (EXISTING) - ENCANA WELL						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 23-20 (EXISTING) - ENCANA WELL - PLAN O

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
14,700.0	7,788.0	7,813.5	7,723.0	99.8	22.8	90.00	5,755.6	495.6	458.6	343.9	114.73	3.997	
14,800.0	7,788.0	7,813.5	7,723.0	101.5	22.8	90.00	5,755.6	495.6	412.4	295.9	116.46	3.541	
14,900.0	7,788.0	7,813.5	7,723.0	103.2	22.8	90.00	5,755.6	495.6	387.0	268.8	118.20	3.274	
14,951.4	7,788.0	7,813.5	7,723.0	104.1	22.8	90.00	5,755.6	495.6	383.6	264.5	119.09	3.221	CC, ES, SF
15,000.0	7,788.0	7,813.5	7,723.0	105.0	22.8	90.00	5,755.6	495.6	386.7	266.7	119.93	3.224	
15,100.0	7,788.0	7,813.5	7,723.0	106.7	22.8	90.00	5,755.6	495.6	411.4	289.7	121.66	3.381	
15,200.0	7,788.0	7,813.5	7,723.0	108.4	22.8	90.00	5,755.6	495.6	457.1	333.7	123.40	3.704	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 24-20 (EXISTING) - ENCANA WELL - ENCAN

Offset Site Error: 0.0 ft

Survey Program: 1173-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	7,788.0	7,941.8	7,714.5	77.3	27.8	88.68	4,471.1	524.1	491.1	392.8	98.30	4.996	
13,500.0	7,788.0	7,942.6	7,715.3	79.1	27.8	88.79	4,471.1	524.1	444.7	344.7	100.02	4.446	
13,600.0	7,788.0	7,943.4	7,716.1	80.8	27.8	88.91	4,471.1	524.1	417.6	315.9	101.74	4.105	
13,666.9	7,788.0	7,944.0	7,716.7	81.9	27.8	88.98	4,471.1	524.2	412.2	309.3	102.89	4.006	CC, ES
13,700.0	7,788.0	7,944.2	7,716.9	82.5	27.8	89.02	4,471.1	524.2	413.5	310.1	103.46	3.997	SF
13,800.0	7,788.0	7,945.0	7,717.7	84.2	27.8	89.13	4,471.1	524.2	433.2	328.0	105.19	4.118	
13,900.0	7,788.0	7,945.8	7,718.5	85.9	27.8	89.24	4,471.1	524.2	473.6	366.6	106.91	4.429	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 1 (EXISTING) - SYNERGY WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8070-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	7,788.0	7,777.0	7,777.0	17.0	13.6	90.00	516.6	437.2	450.9	420.5	30.42	14.825	
9,500.0	7,788.0	7,777.0	7,777.0	17.6	13.6	90.00	516.6	437.2	388.4	357.3	31.07	12.501	
9,600.0	7,788.0	7,777.0	7,777.0	18.4	13.6	90.00	516.6	437.2	344.1	312.2	31.87	10.797	
9,700.0	7,788.0	7,777.0	7,777.0	19.3	13.6	90.00	516.6	437.2	325.4	292.6	32.79	9.925	
9,712.4	7,788.0	7,777.0	7,777.0	19.4	13.6	90.00	516.6	437.2	325.2	292.3	32.92	9.879	CC, ES, SF
9,800.0	7,788.0	7,777.0	7,777.0	20.3	13.6	90.00	516.6	437.2	336.8	303.0	33.83	9.957	
9,900.0	7,788.0	7,777.0	7,777.0	21.5	13.6	90.00	516.6	437.2	375.4	340.5	34.95	10.741	
10,000.0	7,788.0	7,777.0	7,777.0	22.7	13.6	90.00	516.6	437.2	434.2	398.0	36.16	12.006	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 2 (EXISTING) - SYNERGY WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8540-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
600.0	600.0	588.0	588.0	1.0	1.0	39.71	-408.0	-291.3	498.6	496.5	2.05	242.960	
700.0	699.9	687.9	687.9	1.2	1.2	40.05	-408.0	-291.3	495.2	492.8	2.40	205.963	
800.0	799.7	787.7	787.7	1.4	1.4	40.54	-408.0	-291.3	490.6	487.8	2.76	177.700	
900.0	899.4	887.4	887.4	1.6	1.5	41.18	-408.0	-291.3	484.6	481.5	3.12	155.201	
1,000.0	998.9	986.9	986.9	1.8	1.7	41.99	-408.0	-291.3	477.4	474.0	3.49	136.708	
1,100.0	1,098.3	1,086.3	1,086.3	2.1	1.9	42.97	-408.0	-291.3	469.1	465.2	3.87	121.118	
1,200.0	1,197.4	1,185.4	1,185.4	2.3	2.1	44.14	-408.0	-291.3	459.6	455.3	4.27	107.705	
1,300.0	1,296.3	1,284.3	1,284.3	2.6	2.2	45.52	-408.0	-291.3	449.0	444.4	4.68	95.979	
1,400.0	1,394.9	1,382.9	1,382.9	2.9	2.4	47.14	-408.0	-291.3	437.6	432.4	5.11	85.600	
1,500.0	1,493.3	1,481.3	1,481.3	3.3	2.6	49.01	-408.0	-291.3	425.3	419.7	5.57	76.328	
1,600.0	1,591.2	1,579.2	1,579.2	3.6	2.8	51.18	-408.0	-291.3	412.3	406.3	6.06	67.998	
1,700.0	1,688.9	1,676.9	1,676.9	4.0	2.9	53.67	-408.0	-291.3	398.9	392.3	6.59	60.496	
1,800.0	1,786.1	1,774.1	1,774.1	4.5	3.1	56.50	-408.0	-291.3	385.3	378.2	7.17	53.775	
1,900.0	1,883.2	1,871.2	1,871.2	4.9	3.3	59.50	-408.0	-291.3	372.4	364.7	7.77	47.959	
2,000.0	1,980.4	1,968.4	1,968.4	5.3	3.4	62.68	-408.0	-291.3	360.7	352.3	8.39	42.988	
2,100.0	2,077.5	2,065.5	2,065.5	5.7	3.6	66.07	-408.0	-291.3	350.1	341.1	9.03	38.754	
2,200.0	2,174.6	2,162.6	2,162.6	6.2	3.8	69.64	-408.0	-291.3	340.9	331.2	9.69	35.166	
2,300.0	2,271.7	2,259.7	2,259.7	6.6	3.9	73.38	-408.0	-291.3	333.1	322.8	10.36	32.147	
2,400.0	2,368.8	2,356.8	2,356.8	7.0	4.1	77.27	-408.0	-291.3	326.9	315.9	11.03	29.628	
2,500.0	2,466.0	2,454.0	2,454.0	7.5	4.3	81.29	-408.0	-291.3	322.4	310.7	11.70	27.553	
2,600.0	2,563.1	2,551.1	2,551.1	7.9	4.5	85.40	-408.0	-291.3	319.5	307.2	12.35	25.870	
2,700.0	2,660.2	2,648.2	2,648.2	8.4	4.6	89.55	-408.0	-291.3	318.4	305.5	12.98	24.533	
2,710.8	2,670.7	2,658.7	2,658.7	8.4	4.6	90.00	-408.0	-291.3	318.4	305.4	13.05	24.408	CC, ES
2,800.0	2,757.3	2,745.3	2,745.3	8.8	4.8	93.71	-408.0	-291.3	319.1	305.6	13.58	23.502	
2,900.0	2,854.4	2,842.4	2,842.4	9.2	5.0	97.83	-408.0	-291.3	321.6	307.5	14.14	22.740	
3,000.0	2,951.6	2,939.6	2,939.6	9.7	5.1	101.87	-408.0	-291.3	325.8	311.1	14.67	22.212	
3,100.0	3,048.7	3,036.7	3,036.7	10.1	5.3	105.79	-408.0	-291.3	331.6	316.5	15.15	21.887	
3,200.0	3,145.8	3,133.8	3,133.8	10.6	5.5	109.57	-408.0	-291.3	339.1	323.5	15.60	21.739	
3,300.0	3,242.9	3,230.9	3,230.9	11.0	5.6	113.18	-408.0	-291.3	348.0	332.0	16.01	21.742	
3,400.0	3,340.1	3,328.1	3,328.1	11.5	5.8	116.60	-408.0	-291.3	358.3	341.9	16.38	21.873	
3,500.0	3,437.2	3,425.2	3,425.2	11.9	6.0	119.83	-408.0	-291.3	369.8	353.1	16.72	22.113	
3,600.0	3,534.3	3,522.3	3,522.3	12.4	6.1	122.87	-408.0	-291.3	382.5	365.4	17.04	22.443	
3,700.0	3,631.4	3,619.4	3,619.4	12.8	6.3	125.71	-408.0	-291.3	396.1	378.8	17.34	22.849	
3,800.0	3,728.5	3,716.5	3,716.5	13.3	6.5	128.36	-408.0	-291.3	410.8	393.1	17.62	23.315	
3,900.0	3,825.7	3,813.7	3,813.7	13.7	6.7	130.83	-408.0	-291.3	426.2	408.3	17.88	23.831	
4,000.0	3,922.8	3,910.8	3,910.8	14.2	6.8	133.13	-408.0	-291.3	442.4	424.3	18.14	24.387	
4,100.0	4,019.9	4,007.9	4,007.9	14.6	7.0	135.27	-408.0	-291.3	459.3	440.9	18.39	24.973	
4,200.0	4,117.0	4,105.0	4,105.0	15.0	7.2	137.26	-408.0	-291.3	476.7	458.1	18.64	25.581	
4,300.0	4,214.1	4,202.1	4,202.1	15.5	7.3	139.11	-408.0	-291.3	494.7	475.8	18.88	26.207	
8,500.0	7,788.0	7,776.0	7,776.0	19.1	13.6	-90.00	-408.0	-291.3	495.5	462.9	32.52	15.235	
8,600.0	7,788.0	7,776.0	7,776.0	18.2	13.6	-90.00	-408.0	-291.3	444.9	413.2	31.63	14.065	
8,700.0	7,788.0	7,776.0	7,776.0	17.4	13.6	-90.00	-408.0	-291.3	412.7	381.9	30.87	13.370	
8,787.8	7,788.0	7,776.0	7,776.0	16.9	13.6	-90.00	-408.0	-291.3	403.3	372.9	30.34	13.294	SF
8,800.0	7,788.0	7,776.0	7,776.0	16.8	13.6	-90.00	-408.0	-291.3	403.5	373.2	30.26	13.332	
8,900.0	7,788.0	7,776.0	7,776.0	16.4	13.6	-90.00	-408.0	-291.3	418.6	388.8	29.82	14.037	
9,000.0	7,788.0	7,776.0	7,776.0	16.1	13.6	-90.00	-408.0	-291.3	455.7	426.1	29.56	15.415	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 2-0-29 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 41-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,500.0	7,788.0	7,856.8	7,749.4	62.0	21.5	-89.66	3,681.6	-162.3	466.5	389.8	76.72	6.081	
12,600.0	7,788.0	7,858.8	7,751.4	63.7	21.5	-90.08	3,681.6	-162.2	390.1	311.6	78.42	4.974	
12,700.0	7,788.0	7,860.8	7,753.4	65.4	21.5	-90.51	3,681.7	-162.2	326.6	246.5	80.13	4.076	
12,800.0	7,788.0	7,862.8	7,755.4	67.1	21.5	-90.92	3,681.7	-162.1	284.9	203.1	81.84	3.481	
12,877.5	7,788.0	7,864.4	7,757.0	68.4	21.5	-91.24	3,681.8	-162.1	274.2	191.0	83.16	3.297	CC, ES
12,900.0	7,788.0	7,864.8	7,757.4	68.8	21.5	-91.34	3,681.8	-162.1	275.1	191.5	83.54	3.293	SF
13,000.0	7,788.0	7,866.8	7,759.3	70.5	21.5	-91.74	3,681.8	-162.0	300.3	215.0	85.25	3.522	
13,100.0	7,788.0	7,868.7	7,761.3	72.2	21.5	-92.15	3,681.8	-162.0	353.0	266.1	86.95	4.060	
13,200.0	7,788.0	7,870.6	7,763.2	73.9	21.5	-92.55	3,681.9	-162.0	423.2	334.6	88.64	4.774	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 22-29 (EXISTING) - ENCANA WELL - SURVEYS

Survey Program: 132-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
10,600.0	7,788.0	8,350.3	7,767.1	31.0	44.6	90.45	1,666.6	502.0	470.1	404.8	65.29	7.200	
10,700.0	7,788.0	8,347.6	7,764.4	32.5	44.6	90.06	1,666.7	502.0	422.5	355.6	66.81	6.324	
10,800.0	7,788.0	8,344.9	7,761.7	34.1	44.6	89.67	1,666.8	501.9	394.9	326.6	68.35	5.778	
10,862.6	7,788.0	8,343.2	7,760.1	35.0	44.6	89.42	1,666.8	501.9	389.9	320.6	69.32	5.625	CC, ES
10,900.0	7,788.0	8,342.3	7,759.1	35.6	44.6	89.28	1,666.8	501.9	391.7	321.8	69.91	5.604	SF
11,000.0	7,788.0	8,339.6	7,756.5	37.2	44.6	88.89	1,666.9	501.9	413.4	342.0	71.48	5.784	
11,100.0	7,788.0	8,337.0	7,753.9	38.8	44.6	88.51	1,667.0	501.9	456.5	383.4	73.06	6.248	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - PRATT 2-4-29 (EXISTING) - ENCANA WELL - PLAN ONL

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
10,000.0	7,788.0	8,230.1	7,751.0	22.7	44.1	-90.00	1,187.6	-148.4	463.4	399.9	63.56	7.292	
10,100.0	7,788.0	8,230.1	7,751.0	23.9	44.1	-90.00	1,187.6	-148.4	384.9	320.0	64.83	5.936	
10,200.0	7,788.0	8,230.1	7,751.0	25.3	44.1	-90.00	1,187.6	-148.4	318.5	252.3	66.17	4.814	
10,300.0	7,788.0	8,230.1	7,751.0	26.7	44.1	-90.00	1,187.6	-148.4	273.4	205.9	67.55	4.048	
10,383.3	7,788.0	8,230.1	7,751.0	27.8	44.1	-90.00	1,187.6	-148.4	260.4	191.7	68.74	3.789	CC, ES
10,400.0	7,788.0	8,230.1	7,751.0	28.1	44.1	-90.00	1,187.6	-148.4	261.0	192.0	68.98	3.784	SF
10,500.0	7,788.0	8,230.1	7,751.0	29.5	44.1	-90.00	1,187.6	-148.4	285.4	214.9	70.44	4.051	
10,600.0	7,788.0	8,230.1	7,751.0	31.0	44.1	-90.00	1,187.6	-148.4	338.8	266.8	71.93	4.710	
10,700.0	7,788.0	8,230.1	7,751.0	32.5	44.1	-90.00	1,187.6	-148.4	410.0	336.6	73.44	5.583	
10,800.0	7,788.0	8,230.1	7,751.0	34.1	44.1	-90.00	1,187.6	-148.4	491.4	416.4	74.98	6.553	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 13-29D (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
700.0	699.9	742.2	739.3	1.2	1.6	46.17	-370.9	-327.0	490.4	487.6	2.77	177.092	
800.0	799.7	843.8	838.8	1.4	2.0	49.08	-351.8	-335.3	478.2	474.9	3.32	143.871	
900.0	899.4	938.8	931.3	1.6	2.3	52.32	-332.8	-344.6	466.3	462.4	3.90	119.459	
1,000.0	998.9	1,037.9	1,027.7	1.8	2.8	56.13	-311.9	-354.3	454.4	449.9	4.54	100.069	
1,100.0	1,098.3	1,128.9	1,116.1	2.1	3.2	60.05	-292.2	-363.5	443.7	438.5	5.18	85.569	
1,200.0	1,197.4	1,220.4	1,204.9	2.3	3.6	64.35	-272.3	-373.4	435.1	429.2	5.86	74.232	
1,300.0	1,296.3	1,310.9	1,292.6	2.6	4.0	68.88	-252.8	-383.6	429.2	422.6	6.55	65.473	
1,400.0	1,394.9	1,397.0	1,376.1	2.9	4.4	73.42	-234.5	-394.1	426.9	419.6	7.24	58.946	
1,403.5	1,398.4	1,400.3	1,379.4	3.0	4.4	73.60	-233.8	-394.5	426.9	419.6	7.27	58.734	CC, ES
1,500.0	1,493.3	1,483.7	1,460.1	3.3	4.8	78.14	-216.3	-405.6	428.9	421.0	7.94	54.033	
1,600.0	1,591.2	1,575.7	1,549.1	3.6	5.2	83.24	-197.0	-418.3	435.1	426.4	8.64	50.346	
1,700.0	1,688.9	1,667.2	1,637.8	4.0	5.6	88.30	-177.8	-430.5	444.8	435.5	9.31	47.765	
1,800.0	1,786.1	1,756.8	1,724.6	4.5	6.0	93.22	-159.0	-442.2	458.4	448.4	9.95	46.088	
1,900.0	1,883.2	1,846.7	1,811.6	4.9	6.5	98.09	-139.5	-453.8	475.9	465.4	10.51	45.261	
2,000.0	1,980.4	1,939.3	1,901.3	5.3	6.9	102.81	-119.3	-465.3	496.7	485.7	11.02	45.060	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 24-29 PD (EXISTING) - SYNERGY WELL - S

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
0.0	0.0	2.0	2.0	0.0	0.0	-147.04	-409.0	-265.2	487.5				
100.0	100.0	104.5	104.5	0.2	0.2	-147.01	-408.7	-265.3	487.2	486.9	0.33	1,496.044	
200.0	200.0	207.0	207.0	0.3	0.3	-146.94	-407.7	-265.4	486.5	485.8	0.67	725.374	
300.0	300.0	309.5	309.4	0.5	0.5	-146.93	-406.5	-264.7	485.2	484.2	1.02	475.745	
387.4	387.4	389.5	389.4	0.7	0.7	-147.28	-407.4	-261.8	484.2	482.9	1.32	367.787	
400.0	400.0	400.3	400.2	0.7	0.7	-147.35	-407.7	-261.3	484.3	482.9	1.36	356.442	
500.0	500.0	491.2	490.8	0.9	0.9	35.77	-412.8	-256.0	485.1	483.4	1.72	281.714	
600.0	600.0	589.7	588.6	1.0	1.1	34.59	-420.9	-247.6	485.7	483.5	2.14	226.970	
700.0	699.9	697.3	695.0	1.2	1.4	33.04	-430.9	-235.1	484.3	481.7	2.63	184.425	
800.0	799.7	805.5	801.6	1.4	1.8	31.29	-440.2	-219.2	479.8	476.7	3.15	152.203	
900.0	899.4	904.3	898.7	1.6	2.1	29.55	-448.7	-202.7	473.3	469.6	3.68	128.464	
1,000.0	998.9	1,003.8	996.3	1.8	2.5	27.78	-457.4	-185.5	465.6	461.4	4.22	110.408	
1,100.0	1,098.3	1,100.4	1,091.1	2.1	2.8	26.16	-465.8	-169.3	457.0	452.2	4.74	96.396	
1,200.0	1,197.4	1,201.2	1,189.8	2.3	3.2	24.35	-475.0	-151.3	447.3	441.9	5.32	84.098	
1,300.0	1,296.3	1,300.3	1,286.3	2.6	3.7	22.13	-484.8	-130.4	436.1	430.1	5.92	73.658	
1,400.0	1,394.9	1,389.0	1,372.1	2.9	4.1	19.93	-494.7	-110.5	424.8	418.4	6.48	65.565	
1,500.0	1,493.3	1,481.4	1,461.4	3.3	4.5	17.54	-506.6	-89.9	414.6	407.5	7.04	58.909	
1,600.0	1,591.2	1,578.2	1,555.0	3.6	5.0	15.07	-519.7	-69.2	404.2	396.6	7.57	53.377	
1,700.0	1,688.9	1,681.5	1,655.3	4.0	5.5	12.56	-532.9	-48.3	392.3	384.3	8.09	48.482	
1,800.0	1,786.1	1,783.1	1,754.3	4.5	5.9	10.08	-544.5	-28.5	378.4	369.9	8.58	44.116	
1,900.0	1,883.2	1,886.8	1,855.3	4.9	6.4	7.20	-554.6	-7.1	362.9	353.8	9.08	39.980	
2,000.0	1,980.4	1,977.4	1,943.2	5.3	6.8	4.23	-563.8	13.0	348.8	339.3	9.52	36.654	
2,100.0	2,077.5	2,070.0	2,032.6	5.7	7.2	0.86	-574.9	34.3	337.6	327.6	9.93	34.005	
2,200.0	2,174.6	2,169.9	2,129.1	6.2	7.7	-2.99	-586.6	57.1	327.6	317.2	10.32	31.731	
2,300.0	2,271.7	2,265.7	2,221.6	6.6	8.2	-6.87	-598.0	79.0	319.3	308.6	10.68	29.887	
2,400.0	2,368.8	2,364.9	2,317.9	7.0	8.6	-10.85	-609.5	100.4	312.0	300.9	11.04	28.269	
2,500.0	2,466.0	2,460.6	2,410.4	7.5	9.1	-15.07	-620.7	122.3	306.8	295.4	11.39	26.935	
2,600.0	2,563.1	2,560.6	2,507.1	7.9	9.6	-19.63	-631.5	145.1	302.7	291.0	11.74	25.776	
2,700.0	2,660.2	2,660.6	2,604.2	8.4	10.0	-24.05	-642.6	166.4	300.1	288.0	12.11	24.773	
2,800.0	2,757.3	2,763.7	2,704.6	8.8	10.5	-28.76	-652.1	188.0	297.5	285.0	12.50	23.798	
2,900.0	2,854.4	2,862.8	2,801.5	9.2	10.9	-33.02	-661.1	206.5	295.3	282.4	12.91	22.871	
2,948.8	2,901.9	2,908.7	2,846.3	9.5	11.1	-35.01	-665.3	215.1	294.9	281.8	13.12	22.468	CC, ES
3,000.0	2,951.6	2,952.9	2,889.5	9.7	11.3	-36.95	-669.7	223.8	295.6	282.2	13.35	22.136	
3,100.0	3,048.7	3,044.1	2,977.8	10.1	11.7	-41.02	-680.0	243.8	300.6	286.7	13.85	21.699	
3,200.0	3,145.8	3,140.5	3,071.1	10.6	12.2	-45.38	-690.4	266.3	308.2	293.8	14.41	21.389	
3,300.0	3,242.9	3,238.6	3,166.0	11.0	12.7	-49.19	-702.7	287.6	317.3	302.2	15.02	21.125	
3,400.0	3,340.1	3,332.6	3,257.0	11.5	13.1	-52.40	-715.7	307.4	327.8	312.1	15.68	20.913	
3,500.0	3,437.2	3,422.7	3,343.8	11.9	13.6	-55.46	-728.0	328.3	341.2	324.8	16.39	20.818	
3,600.0	3,534.3	3,518.0	3,435.1	12.4	14.1	-58.50	-741.5	351.9	357.4	340.2	17.18	20.796	
3,700.0	3,631.4	3,620.1	3,533.1	12.8	14.6	-61.54	-755.3	376.7	373.8	355.7	18.07	20.688	
3,800.0	3,728.5	3,716.0	3,625.4	13.3	15.1	-64.01	-768.8	398.9	390.1	371.2	18.95	20.587	
3,900.0	3,825.7	3,816.0	3,721.6	13.7	15.6	-66.34	-783.4	422.1	407.5	387.6	19.88	20.498	
4,000.0	3,922.8	3,925.0	3,827.1	14.2	16.1	-68.87	-797.2	446.1	423.7	402.8	20.90	20.271	
4,100.0	4,019.9	4,038.2	3,937.6	14.6	16.6	-71.73	-807.4	468.1	437.1	415.1	22.01	19.858	
4,200.0	4,117.0	4,140.8	4,038.3	15.0	17.0	-74.18	-816.1	485.8	449.1	426.1	23.08	19.456	
4,300.0	4,214.1	4,243.3	4,139.0	15.5	17.3	-76.37	-825.6	502.4	460.9	436.7	24.14	19.088	
4,400.0	4,311.3	4,356.5	4,250.6	15.9	17.7	-78.70	-835.5	518.8	471.6	446.3	25.26	18.667	
4,500.0	4,408.4	4,474.4	4,367.6	16.4	18.0	-81.26	-843.4	531.0	478.5	452.1	26.43	18.103	
4,600.0	4,505.5	4,584.1	4,476.8	16.8	18.2	-83.68	-849.6	539.0	483.1	455.6	27.55	17.535	
4,700.0	4,602.6	4,701.0	4,593.5	17.3	18.4	-86.51	-853.6	543.7	485.1	456.4	28.71	16.898	
4,800.0	4,699.7	4,801.8	4,694.2	17.7	18.5	-89.12	-855.4	545.7	486.2	456.4	29.76	16.334	
4,900.0	4,796.9	4,902.1	4,794.6	18.2	18.6	-91.77	-856.8	547.0	487.6	456.8	30.79	15.836	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 24-29 PD (EXISTING) - SYNERGY WELL - S

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
5,000.0	4,894.0	5,002.0	4,894.4	18.6	18.7	-94.41	-858.0	547.7	489.5	457.8	31.78	15.406	
5,100.0	4,991.1	5,100.0	4,992.4	19.1	18.8	-97.01	-859.0	548.0	492.1	459.4	32.71	15.047	
5,200.0	5,088.2	5,196.0	5,088.5	19.5	18.8	-99.56	-859.6	548.4	495.9	462.3	33.58	14.769	
8,100.0	7,757.7	7,869.7	7,761.7	23.6	21.0	79.24	-852.1	512.7	467.7	428.4	39.33	11.893	
8,200.0	7,781.4	7,893.3	7,785.2	22.3	21.0	87.13	-852.0	512.5	425.6	387.5	38.10	11.170	
8,300.0	7,788.0	7,900.2	7,792.2	21.2	21.0	90.32	-851.9	512.5	402.9	366.0	36.87	10.928	SF
8,343.8	7,788.0	7,900.4	7,792.4	20.7	21.0	90.35	-851.9	512.5	400.5	364.1	36.39	11.007	
8,400.0	7,788.0	7,900.7	7,792.7	20.1	21.0	90.38	-851.9	512.5	404.4	368.7	35.76	11.308	
8,500.0	7,788.0	7,901.2	7,793.2	19.1	21.0	90.45	-851.9	512.5	429.9	395.1	34.76	12.368	
8,600.0	7,788.0	7,901.7	7,793.7	18.2	21.0	90.52	-851.9	512.5	475.4	441.6	33.87	14.038	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

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
800.0	799.7	787.7	787.7	1.4	1.4	41.63	-408.4	-303.3	498.2	495.4	2.76	180.419	
900.0	899.4	887.4	887.4	1.6	1.5	42.27	-408.4	-303.3	492.3	489.2	3.12	157.606	
1,000.0	998.9	986.9	986.9	1.8	1.7	43.08	-408.4	-303.3	485.3	481.8	3.49	138.860	
1,100.0	1,098.3	1,078.1	1,078.1	2.1	1.9	43.88	-409.4	-303.1	477.8	473.9	3.86	123.711	
1,200.0	1,197.4	1,168.4	1,168.3	2.3	2.0	44.56	-413.2	-302.4	471.1	466.8	4.24	111.024	
1,300.0	1,296.3	1,259.0	1,258.6	2.6	2.2	45.11	-419.8	-301.1	465.1	460.5	4.64	100.143	
1,400.0	1,394.9	1,349.8	1,349.0	2.9	2.4	45.52	-429.3	-299.2	459.9	454.9	5.07	90.666	
1,500.0	1,493.3	1,440.9	1,439.2	3.3	2.6	45.79	-441.6	-296.8	455.4	449.9	5.53	82.319	
1,600.0	1,591.2	1,532.2	1,529.1	3.6	2.9	45.91	-456.7	-293.8	451.7	445.6	6.03	74.913	
1,700.0	1,688.9	1,623.5	1,618.6	4.0	3.2	45.88	-474.7	-290.2	448.6	442.0	6.57	68.321	
1,800.0	1,786.1	1,714.8	1,707.4	4.5	3.5	45.69	-495.4	-286.1	446.2	439.1	7.14	62.504	
1,900.0	1,883.2	1,814.4	1,803.9	4.9	3.9	45.33	-519.6	-281.3	444.6	436.8	7.76	57.308	
2,000.0	1,980.4	1,914.4	1,900.7	5.3	4.3	44.96	-544.0	-276.5	442.9	434.6	8.39	52.808	
2,100.0	2,077.5	2,014.3	1,997.5	5.7	4.7	44.60	-568.3	-271.7	441.3	432.3	9.03	48.900	
2,200.0	2,174.6	2,114.2	2,094.3	6.2	5.1	44.23	-592.7	-266.9	439.7	430.1	9.67	45.490	
2,300.0	2,271.7	2,214.2	2,191.2	6.6	5.5	43.86	-617.0	-262.1	438.1	427.8	10.31	42.499	
2,400.0	2,368.8	2,314.1	2,288.0	7.0	5.9	43.48	-641.4	-257.3	436.6	425.6	10.95	39.861	
2,500.0	2,466.0	2,414.1	2,384.8	7.5	6.4	43.11	-665.7	-252.4	435.0	423.4	11.59	37.521	
2,600.0	2,563.1	2,514.0	2,481.6	7.9	6.8	42.73	-690.0	-247.6	433.5	421.3	12.23	35.435	
2,700.0	2,660.2	2,614.0	2,578.4	8.4	7.3	42.35	-714.4	-242.8	432.0	419.1	12.87	33.566	
2,800.0	2,757.3	2,713.9	2,675.3	8.8	7.7	41.96	-738.7	-238.0	430.5	417.0	13.50	31.885	
2,900.0	2,854.4	2,813.9	2,772.1	9.2	8.2	41.57	-763.1	-233.2	429.0	414.9	14.13	30.365	
3,000.0	2,951.6	2,913.8	2,868.9	9.7	8.6	41.18	-787.4	-228.4	427.6	412.8	14.75	28.986	
3,100.0	3,048.7	3,013.8	2,965.7	10.1	9.1	40.79	-811.8	-223.5	426.2	410.8	15.37	27.729	
3,200.0	3,145.8	3,113.7	3,062.5	10.6	9.5	40.40	-836.1	-218.7	424.8	408.8	15.98	26.581	
3,300.0	3,242.9	3,213.7	3,159.3	11.0	10.0	40.00	-860.4	-213.9	423.4	406.8	16.58	25.528	
3,400.0	3,340.1	3,313.6	3,256.2	11.5	10.4	39.60	-884.8	-209.1	422.0	404.8	17.18	24.560	
3,500.0	3,437.2	3,413.6	3,353.0	11.9	10.9	39.19	-909.1	-204.3	420.7	402.9	17.77	23.668	
3,600.0	3,534.3	3,513.5	3,449.8	12.4	11.4	38.79	-933.5	-199.5	419.3	401.0	18.36	22.842	
3,700.0	3,631.4	3,613.5	3,546.6	12.8	11.8	38.38	-957.8	-194.7	418.0	399.1	18.93	22.077	
3,800.0	3,728.5	3,713.4	3,643.4	13.3	12.3	37.97	-982.2	-189.8	416.7	397.2	19.50	21.367	
3,900.0	3,825.7	3,813.3	3,740.2	13.7	12.7	37.56	-1,006.5	-185.0	415.5	395.4	20.07	20.706	
4,000.0	3,922.8	3,913.3	3,837.1	14.2	13.2	37.14	-1,030.9	-180.2	414.2	393.6	20.62	20.090	
4,100.0	4,019.9	4,013.2	3,933.9	14.6	13.7	36.72	-1,055.2	-175.4	413.0	391.9	21.16	19.514	
4,200.0	4,117.0	4,113.2	4,030.7	15.0	14.1	36.30	-1,079.5	-170.6	411.8	390.1	21.70	18.976	
4,300.0	4,214.1	4,213.1	4,127.5	15.5	14.6	35.88	-1,103.9	-165.8	410.6	388.4	22.23	18.471	
4,400.0	4,311.3	4,313.1	4,224.3	15.9	15.1	35.45	-1,128.2	-161.0	409.5	386.7	22.75	17.998	
4,500.0	4,408.4	4,413.0	4,321.1	16.4	15.5	35.03	-1,152.6	-156.1	408.4	385.1	23.27	17.553	
4,600.0	4,505.5	4,513.0	4,418.0	16.8	16.0	34.60	-1,176.9	-151.3	407.3	383.5	23.77	17.134	
4,700.0	4,602.6	4,612.9	4,514.8	17.3	16.4	34.16	-1,201.3	-146.5	406.2	381.9	24.26	16.740	
4,800.0	4,699.7	4,712.9	4,611.6	17.7	16.9	33.73	-1,225.6	-141.7	405.1	380.4	24.75	16.369	
4,900.0	4,796.9	4,812.8	4,708.4	18.2	17.4	33.29	-1,249.9	-136.9	404.1	378.9	25.23	16.018	
5,000.0	4,894.0	4,912.8	4,805.2	18.6	17.8	32.85	-1,274.3	-132.1	403.1	377.4	25.69	15.687	
5,100.0	4,991.1	5,012.7	4,902.1	19.1	18.3	32.41	-1,298.6	-127.2	402.1	375.9	26.15	15.374	
5,200.0	5,088.2	5,112.7	4,998.9	19.5	18.8	31.97	-1,323.0	-122.4	401.1	374.5	26.60	15.078	
5,300.0	5,185.3	5,213.5	5,096.5	20.0	19.2	31.52	-1,347.5	-117.6	400.2	373.1	27.04	14.797	
5,400.0	5,282.5	5,325.7	5,205.8	20.4	19.7	31.24	-1,372.4	-112.6	397.5	370.0	27.54	14.434	
5,500.0	5,379.6	5,437.6	5,315.7	20.9	20.1	31.35	-1,393.1	-108.6	391.8	363.6	28.14	13.921	
5,600.0	5,476.7	5,548.9	5,425.8	21.3	20.4	31.88	-1,409.5	-105.3	383.0	354.1	28.87	13.267	
5,700.0	5,573.8	5,659.3	5,535.5	21.8	20.6	32.84	-1,421.6	-102.9	371.3	341.6	29.74	12.485	
5,800.0	5,670.9	5,768.5	5,644.3	22.2	20.8	34.31	-1,429.4	-101.4	356.8	326.0	30.78	11.593	
5,900.0	5,768.1	5,876.1	5,751.9	22.7	20.9	36.36	-1,433.2	-100.6	339.8	307.8	32.02	10.613	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

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
6,000.0	5,865.2	5,977.4	5,853.2	23.1	21.0	38.91	-1,433.6	-100.6	321.0	287.6	33.44	9.600	
6,100.0	5,962.3	6,074.5	5,950.3	23.6	21.1	41.71	-1,433.6	-100.6	302.6	267.7	34.95	8.659	
6,200.0	6,059.4	6,171.6	6,047.4	24.0	21.2	44.86	-1,433.6	-100.6	285.0	248.5	36.57	7.794	
6,300.0	6,156.6	6,268.8	6,144.6	24.5	21.3	48.39	-1,433.6	-100.6	268.4	230.1	38.31	7.007	
6,400.0	6,253.7	6,365.9	6,241.7	24.9	21.4	52.35	-1,433.6	-100.6	253.0	212.8	40.14	6.302	
6,500.0	6,350.8	6,463.0	6,338.8	25.4	21.5	56.79	-1,433.6	-100.6	238.9	196.8	42.02	5.684	
6,600.0	6,447.9	6,560.1	6,435.9	25.8	21.6	61.73	-1,433.6	-100.6	226.4	182.5	43.91	5.157	
6,700.0	6,545.0	6,657.2	6,533.0	26.3	21.6	67.17	-1,433.6	-100.6	215.9	170.2	45.71	4.723	
6,800.0	6,642.2	6,754.4	6,630.2	26.7	21.7	73.08	-1,433.6	-100.6	207.6	160.3	47.31	4.387	
6,900.0	6,739.3	6,851.5	6,727.3	27.2	21.8	79.39	-1,433.6	-100.6	201.7	153.1	48.60	4.151	
7,000.0	6,836.4	6,948.6	6,824.4	27.6	21.9	85.96	-1,433.6	-100.6	198.6	149.1	49.47	4.014	
7,060.4	6,895.0	7,007.3	6,883.0	27.9	22.0	90.00	-1,433.6	-100.6	198.1	148.3	49.76	3.980	CC, ES
7,100.0	6,933.5	7,045.7	6,921.5	28.1	22.0	92.65	-1,433.6	-100.6	198.3	148.4	49.85	3.978	SF
7,200.0	7,030.6	7,142.8	7,018.6	28.5	22.1	99.26	-1,433.6	-100.6	200.9	151.1	49.74	4.038	
7,300.0	7,128.2	7,240.4	7,116.2	28.9	22.2	107.60	-1,433.6	-100.6	205.7	156.5	49.17	4.183	
7,400.0	7,227.9	7,340.1	7,215.9	29.0	22.3	-113.68	-1,433.6	-100.6	208.7	159.8	48.97	4.262	
7,500.0	7,327.1	7,439.3	7,315.1	28.9	22.4	-84.70	-1,433.6	-100.6	208.1	158.6	49.58	4.198	
7,600.0	7,423.0	7,535.2	7,411.0	28.5	22.5	-90.00	-1,433.6	-100.6	206.6	156.2	50.39	4.101	
7,600.0	7,423.0	7,535.2	7,411.0	28.5	22.5	-90.00	-1,433.6	-100.6	206.6	156.2	50.39	4.101	
7,700.0	7,512.5	7,624.7	7,500.5	27.8	22.6	-99.62	-1,433.6	-100.6	210.9	160.8	50.17	4.204	
7,800.0	7,593.0	7,705.2	7,581.0	26.9	22.7	-109.62	-1,433.6	-100.6	229.6	181.4	48.22	4.762	
7,900.0	7,662.1	7,774.3	7,650.1	25.9	22.8	-116.98	-1,433.6	-100.6	268.4	223.0	45.37	5.916	
8,000.0	7,717.5	7,829.7	7,705.5	24.8	22.8	-120.04	-1,433.6	-100.6	327.1	284.1	43.05	7.598	
8,100.0	7,757.7	7,869.9	7,745.7	23.6	22.9	-117.61	-1,433.6	-100.6	401.6	359.3	42.32	9.492	
8,200.0	7,781.4	7,893.6	7,769.4	22.3	22.9	-107.48	-1,433.6	-100.6	486.9	443.6	43.33	11.237	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

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	-147.18	-408.7	-263.6	486.4				
100.0	100.0	89.0	89.0	0.2	0.2	-147.18	-408.7	-263.6	486.3	486.0	0.31	1,582.990	
200.0	200.0	189.0	189.0	0.3	0.3	-147.18	-408.7	-263.6	486.3	485.6	0.66	741.027	
300.0	300.0	279.1	279.1	0.5	0.5	-147.27	-409.7	-263.4	487.2	486.2	0.99	492.371	
400.0	400.0	367.9	367.8	0.7	0.7	-147.57	-413.5	-262.7	490.4	489.0	1.33	369.722	
500.0	500.0	457.4	457.0	0.9	0.8	35.85	-420.0	-261.6	495.1	493.5	1.67	296.647	
600.0	600.0	559.5	558.6	1.0	1.1	35.08	-429.6	-258.1	499.3	497.2	2.06	241.963	
1,000.0	998.9	962.2	955.0	1.8	2.4	29.31	-481.4	-212.2	499.6	495.5	4.04	123.726	
1,100.0	1,098.3	1,060.5	1,050.2	2.1	2.9	27.17	-497.3	-193.2	496.6	491.9	4.64	107.086	
1,200.0	1,197.4	1,157.6	1,143.2	2.3	3.4	24.75	-514.3	-171.5	492.9	487.6	5.27	93.544	
1,300.0	1,296.3	1,253.2	1,234.0	2.6	3.9	22.03	-532.2	-147.3	488.9	483.0	5.92	82.523	
1,400.0	1,394.9	1,348.5	1,323.5	2.9	4.5	19.03	-551.0	-120.7	484.9	478.3	6.57	73.789	
1,500.0	1,493.3	1,444.7	1,413.7	3.3	5.1	15.96	-570.2	-93.5	480.8	473.6	7.19	66.850	
1,600.0	1,591.2	1,541.0	1,504.1	3.6	5.7	12.89	-589.4	-66.2	476.6	468.8	7.78	61.282	
1,700.0	1,688.9	1,637.3	1,594.4	4.0	6.3	9.81	-608.6	-38.9	472.1	463.8	8.32	56.756	
1,800.0	1,786.1	1,733.6	1,684.8	4.5	7.0	6.69	-627.8	-11.6	467.5	458.6	8.82	53.011	
1,900.0	1,883.2	1,829.9	1,775.1	4.9	7.6	3.53	-647.0	15.6	463.8	454.5	9.29	49.923	
2,000.0	1,980.4	1,926.2	1,865.4	5.3	8.2	0.33	-666.2	42.9	461.7	451.9	9.72	47.491	
2,086.0	2,063.9	2,009.1	1,943.2	5.7	8.7	-2.44	-682.7	66.4	461.1	451.0	10.06	45.823	CC
2,100.0	2,077.5	2,022.5	1,955.8	5.7	8.8	-2.89	-685.4	70.2	461.1	451.0	10.12	45.583	ES
2,200.0	2,174.6	2,118.8	2,046.1	6.2	9.4	-6.11	-704.6	97.5	462.1	451.6	10.48	44.092	
2,300.0	2,271.7	2,215.1	2,136.5	6.6	10.1	-9.31	-723.8	124.7	464.7	453.8	10.82	42.935	
2,400.0	2,368.8	2,311.4	2,226.8	7.0	10.7	-12.46	-743.1	152.0	468.8	457.6	11.15	42.044	
2,500.0	2,466.0	2,407.7	2,317.2	7.5	11.3	-15.55	-762.3	179.3	474.3	462.9	11.47	41.364	
2,600.0	2,563.1	2,504.0	2,407.5	7.9	11.9	-18.56	-781.5	206.6	481.4	469.6	11.78	40.852	
2,700.0	2,660.2	2,600.3	2,497.9	8.4	12.5	-21.49	-800.7	233.8	489.8	477.7	12.10	40.471	
2,800.0	2,757.3	2,696.7	2,588.2	8.8	13.2	-24.32	-819.9	261.1	499.5	487.1	12.43	40.189	SF

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3A-29H-M168 - 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	-89.95	0.0	-39.2	39.2				
100.0	100.0	100.0	100.0	0.2	0.2	-89.95	0.0	-39.2	39.2	38.9	0.30	129.115	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-39.2	39.2	38.6	0.65	60.070	CC, ES
300.0	300.0	299.3	299.3	0.5	0.5	-90.00	0.0	-40.1	40.1	39.1	1.00	40.051	
400.0	400.0	398.6	398.5	0.7	0.7	-90.14	-0.1	-42.6	42.7	41.3	1.35	31.647	
500.0	500.0	497.7	497.6	0.9	0.9	94.59	-0.3	-46.9	47.1	45.4	1.70	27.741	
600.0	600.0	596.6	596.3	1.0	1.1	96.97	-0.5	-52.9	53.4	51.3	2.05	26.067	
700.0	699.9	695.2	694.6	1.2	1.3	100.19	-0.8	-60.6	61.7	59.3	2.40	25.677	SF
800.0	799.7	793.4	792.4	1.4	1.5	103.68	-1.2	-69.9	72.3	69.6	2.77	26.095	
900.0	899.4	891.2	889.5	1.6	1.7	107.04	-1.6	-80.8	85.3	82.1	3.16	27.037	
1,000.0	998.9	988.3	985.9	1.8	2.0	110.08	-2.1	-93.3	100.7	97.1	3.56	28.311	
1,100.0	1,098.3	1,084.9	1,081.4	2.1	2.3	112.73	-2.7	-107.4	118.5	114.5	3.98	29.786	
1,200.0	1,197.4	1,180.7	1,175.9	2.3	2.6	115.00	-3.3	-122.9	138.7	134.3	4.42	31.365	
1,300.0	1,296.3	1,277.6	1,271.3	2.6	2.9	117.05	-4.0	-139.6	160.9	156.1	4.89	32.884	
1,400.0	1,394.9	1,374.6	1,366.9	2.9	3.3	119.03	-4.6	-156.5	184.2	178.8	5.39	34.177	
1,500.0	1,493.3	1,471.3	1,462.2	3.3	3.6	120.93	-5.3	-173.3	208.5	202.6	5.91	35.304	
1,600.0	1,591.2	1,567.8	1,557.1	3.6	3.9	122.76	-6.0	-190.0	234.0	227.5	6.44	36.312	
1,700.0	1,688.9	1,663.8	1,651.7	4.0	4.2	124.50	-6.6	-206.7	260.6	253.6	7.00	37.239	
1,800.0	1,786.1	1,759.4	1,745.9	4.5	4.6	126.20	-7.3	-223.3	288.4	280.8	7.57	38.113	
1,900.0	1,883.2	1,855.0	1,839.9	4.9	4.9	127.83	-7.9	-239.8	316.8	308.7	8.15	38.891	
2,000.0	1,980.4	1,950.5	1,934.0	5.3	5.2	129.20	-8.6	-256.4	345.4	336.7	8.72	39.586	
2,100.0	2,077.5	2,046.0	2,028.1	5.7	5.6	130.36	-9.3	-273.0	374.1	364.8	9.30	40.209	
2,200.0	2,174.6	2,141.5	2,122.2	6.2	5.9	131.35	-9.9	-289.6	403.0	393.1	9.88	40.771	
2,300.0	2,271.7	2,237.1	2,216.2	6.6	6.2	132.21	-10.6	-306.2	431.9	421.5	10.46	41.279	
2,400.0	2,368.8	2,332.6	2,310.3	7.0	6.6	132.97	-11.2	-322.7	461.0	449.9	11.04	41.742	
2,500.0	2,466.0	2,428.1	2,404.4	7.5	6.9	133.63	-11.9	-339.3	490.1	478.5	11.62	42.163	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3B-29H-M168 - 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	-89.95	0.0	-30.8	30.8				
100.0	100.0	100.0	100.0	0.2	0.2	-89.95	0.0	-30.8	30.8	30.5	0.30	101.448	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-30.8	30.8	30.2	0.65	47.198	
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	-30.8	30.8	29.8	1.00	30.752	CC, ES
400.0	400.0	399.6	399.6	0.7	0.7	-90.88	-0.5	-31.5	31.5	30.2	1.35	23.338	
500.0	500.0	499.1	499.0	0.9	0.9	91.96	-2.0	-33.6	33.7	32.0	1.70	19.820	
600.0	600.0	598.5	598.4	1.0	1.0	92.21	-4.5	-37.1	37.4	35.3	2.06	18.191	
700.0	699.9	697.8	697.5	1.2	1.2	93.42	-8.1	-42.0	42.6	40.2	2.42	17.595	SF
800.0	799.7	796.9	796.3	1.4	1.4	95.16	-12.6	-48.3	49.3	46.5	2.80	17.610	
900.0	899.4	895.8	894.7	1.6	1.7	97.10	-18.1	-55.9	57.7	54.5	3.20	17.997	
1,000.0	998.9	994.5	992.8	1.8	1.9	99.02	-24.6	-64.9	67.6	64.0	3.63	18.608	
1,100.0	1,098.3	1,092.8	1,090.3	2.1	2.2	100.81	-32.1	-75.2	79.2	75.1	4.09	19.343	
1,200.0	1,197.4	1,190.9	1,187.3	2.3	2.5	102.40	-40.5	-86.8	92.4	87.8	4.59	20.132	
1,300.0	1,296.3	1,289.6	1,284.8	2.6	2.8	104.06	-49.6	-99.4	106.9	101.7	5.12	20.875	
1,400.0	1,394.9	1,388.4	1,382.3	2.9	3.1	106.08	-58.7	-112.0	121.9	116.2	5.68	21.456	
1,500.0	1,493.3	1,487.0	1,479.7	3.3	3.4	108.31	-67.8	-124.5	137.5	131.3	6.27	21.935	
1,600.0	1,591.2	1,585.4	1,576.9	3.6	3.7	110.67	-76.9	-137.1	154.0	147.1	6.89	22.362	
1,700.0	1,688.9	1,683.6	1,673.9	4.0	4.0	113.07	-86.0	-149.6	171.4	163.8	7.53	22.772	
1,800.0	1,786.1	1,781.6	1,770.7	4.5	4.3	115.50	-95.0	-162.1	189.7	181.6	8.18	23.198	
1,900.0	1,883.2	1,879.5	1,867.3	4.9	4.6	117.74	-104.1	-174.6	208.6	199.8	8.83	23.618	
2,000.0	1,980.4	1,977.4	1,964.0	5.3	4.9	119.60	-113.1	-187.1	227.8	218.3	9.49	24.014	
2,100.0	2,077.5	2,075.3	2,060.7	5.7	5.2	121.18	-122.1	-199.6	247.2	237.0	10.14	24.384	
2,200.0	2,174.6	2,173.2	2,157.4	6.2	5.5	122.53	-131.2	-212.1	266.7	255.9	10.79	24.727	
2,300.0	2,271.7	2,271.1	2,254.1	6.6	5.9	123.69	-140.2	-224.5	286.3	274.9	11.43	25.046	
2,400.0	2,368.8	2,369.0	2,350.7	7.0	6.2	124.71	-149.3	-237.0	306.1	294.0	12.08	25.342	
2,500.0	2,466.0	2,466.9	2,447.4	7.5	6.5	125.60	-158.3	-249.5	325.9	313.2	12.72	25.617	
2,600.0	2,563.1	2,564.8	2,544.1	7.9	6.8	126.39	-167.3	-262.0	345.8	332.4	13.37	25.872	
2,700.0	2,660.2	2,662.7	2,640.8	8.4	7.1	127.09	-176.4	-274.5	365.7	351.7	14.01	26.109	
2,800.0	2,757.3	2,760.6	2,737.4	8.8	7.4	127.72	-185.4	-287.0	385.7	371.1	14.65	26.330	
2,900.0	2,854.4	2,858.5	2,834.1	9.2	7.8	128.29	-194.4	-299.4	405.8	390.5	15.29	26.536	
3,000.0	2,951.6	2,956.4	2,930.8	9.7	8.1	128.81	-203.5	-311.9	425.8	409.9	15.93	26.729	
3,100.0	3,048.7	3,054.3	3,027.5	10.1	8.4	129.28	-212.5	-324.4	445.9	429.4	16.57	26.909	
3,200.0	3,145.8	3,152.2	3,124.1	10.6	8.7	129.71	-221.6	-336.9	466.1	448.9	17.21	27.078	
3,300.0	3,242.9	3,250.1	3,220.8	11.0	9.0	130.10	-230.6	-349.4	486.2	468.4	17.85	27.236	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3C-29H-M168 - 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	-89.95	0.0	-19.6	19.6				
100.0	100.0	100.0	100.0	0.2	0.2	-89.95	0.0	-19.6	19.6	19.3	0.30	64.558	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-19.6	19.6	19.0	0.65	30.035	
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	-19.6	19.6	18.6	1.00	19.570	
400.0	400.0	400.0	400.0	0.7	0.7	-89.95	0.0	-19.6	19.6	18.3	1.35	14.513	CC
500.0	500.0	499.9	499.9	0.9	0.9	93.99	-0.8	-19.8	19.8	18.1	1.70	11.650	ES
600.0	600.0	599.9	599.8	1.0	1.0	94.08	-3.4	-20.2	20.4	18.4	2.06	9.942	
700.0	699.9	699.8	699.7	1.2	1.2	94.22	-7.7	-21.0	21.5	19.1	2.42	8.868	
800.0	799.7	799.7	799.4	1.4	1.4	94.39	-13.7	-22.0	23.0	20.2	2.81	8.172	
900.0	899.4	899.6	899.0	1.6	1.6	94.58	-21.4	-23.4	24.9	21.7	3.23	7.714	
1,000.0	998.9	999.5	998.5	1.8	1.8	94.77	-30.8	-25.0	27.2	23.5	3.67	7.410	
1,100.0	1,098.3	1,099.4	1,097.7	2.1	2.1	94.96	-42.0	-27.0	29.9	25.8	4.15	7.209	
1,200.0	1,197.4	1,199.3	1,196.7	2.3	2.3	95.13	-54.8	-29.3	33.1	28.4	4.68	7.077	
1,300.0	1,296.3	1,299.1	1,295.5	2.6	2.6	95.29	-69.3	-31.8	36.7	31.4	5.25	6.990	
1,400.0	1,394.9	1,399.0	1,393.9	2.9	2.9	95.43	-85.5	-34.7	40.7	34.8	5.86	6.933	
1,500.0	1,493.3	1,498.8	1,492.0	3.3	3.3	95.55	-103.4	-37.8	45.1	38.5	6.53	6.897	
1,600.0	1,591.2	1,598.5	1,589.8	3.6	3.6	95.65	-123.0	-41.3	49.9	42.6	7.26	6.875	
1,700.0	1,688.9	1,698.3	1,687.2	4.0	4.0	95.74	-144.2	-45.0	55.1	47.1	8.03	6.862	
1,800.0	1,786.1	1,798.0	1,784.1	4.5	4.4	95.78	-167.1	-49.1	60.8	51.9	8.86	6.857	SF
1,900.0	1,883.2	1,897.8	1,880.9	4.9	4.9	95.19	-191.3	-53.3	66.6	56.9	9.71	6.865	
2,000.0	1,980.4	1,997.6	1,977.6	5.3	5.3	94.62	-215.5	-57.6	72.5	62.0	10.56	6.867	
2,100.0	2,077.5	2,096.5	2,073.5	5.7	5.8	94.21	-239.5	-62.2	78.8	67.4	11.42	6.902	
2,200.0	2,174.6	2,194.8	2,168.7	6.2	6.2	94.11	-262.9	-68.4	86.7	74.4	12.28	7.064	
2,300.0	2,271.7	2,293.8	2,264.7	6.6	6.6	94.22	-286.2	-75.9	96.0	82.8	13.14	7.304	
2,400.0	2,368.8	2,393.4	2,361.1	7.0	7.1	94.32	-309.5	-83.7	105.3	91.3	14.01	7.520	
2,500.0	2,466.0	2,492.9	2,457.6	7.5	7.5	94.41	-332.8	-91.4	114.7	99.8	14.88	7.709	
2,600.0	2,563.1	2,592.5	2,554.1	7.9	8.0	94.49	-356.2	-99.1	124.1	108.3	15.75	7.876	
2,700.0	2,660.2	2,692.0	2,650.6	8.4	8.4	94.55	-379.5	-106.8	133.4	116.8	16.63	8.024	
2,800.0	2,757.3	2,791.6	2,747.1	8.8	8.9	94.61	-402.8	-114.5	142.8	125.3	17.51	8.157	
2,900.0	2,854.4	2,891.2	2,843.5	9.2	9.3	94.66	-426.2	-122.2	152.2	133.8	18.39	8.276	
3,000.0	2,951.6	2,990.7	2,940.0	9.7	9.8	94.70	-449.5	-129.9	161.6	142.3	19.27	8.383	
3,100.0	3,048.7	3,090.3	3,036.5	10.1	10.3	94.74	-472.9	-137.7	170.9	150.8	20.15	8.481	
3,200.0	3,145.8	3,189.8	3,133.0	10.6	10.7	94.78	-496.2	-145.4	180.3	159.3	21.04	8.570	
3,300.0	3,242.9	3,289.4	3,229.4	11.0	11.2	94.81	-519.5	-153.1	189.7	167.7	21.92	8.652	
3,400.0	3,340.1	3,389.0	3,325.9	11.5	11.6	94.84	-542.9	-160.8	199.0	176.2	22.81	8.726	
3,500.0	3,437.2	3,488.5	3,422.4	11.9	12.1	94.86	-566.2	-168.5	208.4	184.7	23.70	8.795	
3,600.0	3,534.3	3,588.1	3,518.9	12.4	12.5	94.89	-589.6	-176.2	217.8	193.2	24.58	8.859	
3,700.0	3,631.4	3,687.6	3,615.4	12.8	13.0	94.91	-612.9	-184.0	227.2	201.7	25.47	8.918	
3,800.0	3,728.5	3,787.2	3,711.8	13.3	13.5	94.93	-636.2	-191.7	236.5	210.2	26.36	8.973	
3,900.0	3,825.7	3,886.8	3,808.3	13.7	13.9	94.95	-659.6	-199.4	245.9	218.6	27.25	9.024	
4,000.0	3,922.8	3,986.3	3,904.8	14.2	14.4	94.97	-682.9	-207.1	255.3	227.1	28.14	9.072	
4,100.0	4,019.9	4,085.9	4,001.3	14.6	14.8	94.98	-706.3	-214.8	264.6	235.6	29.03	9.117	
4,200.0	4,117.0	4,185.4	4,097.7	15.0	15.3	95.00	-729.6	-222.5	274.0	244.1	29.92	9.159	
4,300.0	4,214.1	4,285.0	4,194.2	15.5	15.8	95.01	-752.9	-230.3	283.4	252.6	30.81	9.198	
4,400.0	4,311.3	4,384.6	4,290.7	15.9	16.2	95.02	-776.3	-238.0	292.8	261.1	31.70	9.236	
4,500.0	4,408.4	4,484.1	4,387.2	16.4	16.7	95.04	-799.6	-245.7	302.1	269.5	32.59	9.271	
4,600.0	4,505.5	4,583.7	4,483.6	16.8	17.1	95.05	-823.0	-253.4	311.5	278.0	33.48	9.304	
4,700.0	4,602.6	4,683.2	4,580.1	17.3	17.6	95.06	-846.3	-261.1	320.9	286.5	34.37	9.335	
4,800.0	4,699.7	4,782.8	4,676.6	17.7	18.1	95.07	-869.6	-268.8	330.2	295.0	35.26	9.365	
4,900.0	4,796.9	4,882.4	4,773.1	18.2	18.5	95.08	-893.0	-276.5	339.6	303.5	36.16	9.393	
5,000.0	4,894.0	4,981.9	4,869.6	18.6	19.0	95.09	-916.3	-284.3	349.0	311.9	37.05	9.420	
5,100.0	4,991.1	5,081.5	4,966.0	19.1	19.5	95.10	-939.7	-292.0	358.4	320.4	37.94	9.445	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3C-29H-M168 - 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
5,200.0	5,088.2	5,181.0	5,062.5	19.5	19.9	95.10	-963.0	-299.7	367.7	328.9	38.83	9.470	
5,300.0	5,185.3	5,280.6	5,159.0	20.0	20.4	95.11	-986.3	-307.4	377.1	337.4	39.73	9.493	
5,400.0	5,282.5	5,380.2	5,255.5	20.4	20.8	95.12	-1,009.7	-315.1	386.5	345.9	40.62	9.515	
5,500.0	5,379.6	5,479.7	5,351.9	20.9	21.3	95.13	-1,033.0	-322.8	395.8	354.3	41.51	9.536	
5,600.0	5,476.7	5,579.3	5,448.4	21.3	21.8	95.13	-1,056.3	-330.6	405.2	362.8	42.40	9.556	
5,700.0	5,573.8	5,678.8	5,544.9	21.8	22.2	95.14	-1,079.7	-338.3	414.6	371.3	43.30	9.575	
5,800.0	5,670.9	5,778.4	5,641.4	22.2	22.7	95.15	-1,103.0	-346.0	424.0	379.8	44.19	9.594	
5,900.0	5,768.1	5,878.0	5,737.9	22.7	23.2	95.15	-1,126.4	-353.7	433.3	388.2	45.08	9.612	
6,000.0	5,865.2	5,977.5	5,834.3	23.1	23.6	95.16	-1,149.7	-361.4	442.7	396.7	45.98	9.629	
6,100.0	5,962.3	6,077.1	5,930.8	23.6	24.1	95.16	-1,173.0	-369.1	452.1	405.2	46.87	9.645	
6,200.0	6,059.4	6,176.6	6,027.3	24.0	24.5	95.17	-1,196.4	-376.8	461.4	413.7	47.76	9.661	
6,300.0	6,156.6	6,276.2	6,123.8	24.5	25.0	95.17	-1,219.7	-384.6	470.8	422.2	48.66	9.676	
6,400.0	6,253.7	6,375.8	6,220.2	24.9	25.5	95.18	-1,243.1	-392.3	480.2	430.6	49.55	9.691	
6,500.0	6,350.8	6,475.3	6,316.7	25.4	25.9	95.18	-1,266.4	-400.0	489.6	439.1	50.45	9.705	
6,600.0	6,447.9	6,574.9	6,413.2	25.8	26.4	95.19	-1,289.7	-407.7	498.9	447.6	51.34	9.718	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3D-29H-M168 - 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	-89.96	0.0	-11.2	11.2				
100.0	100.0	100.0	100.0	0.2	0.2	-89.96	0.0	-11.2	11.2	10.9	0.30	36.890	
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-11.2	11.2	10.6	0.65	17.163	
300.0	300.0	300.0	300.0	0.5	0.5	-89.96	0.0	-11.2	11.2	10.2	1.00	11.183	
400.0	400.0	400.0	400.0	0.7	0.7	-89.96	0.0	-11.2	11.2	9.9	1.35	8.293	CC
500.0	500.0	500.0	500.0	0.9	0.8	98.37	0.0	-11.2	11.3	9.6	1.70	6.643	ES
600.0	600.0	599.9	599.9	1.0	1.0	107.21	-0.6	-11.8	12.4	10.3	2.05	6.023	
700.0	699.9	699.7	699.7	1.2	1.2	114.39	-2.6	-13.6	15.1	12.6	2.41	6.241	
800.0	799.7	799.5	799.4	1.4	1.4	119.28	-5.7	-16.4	19.2	16.5	2.78	6.917	
900.0	899.4	899.4	899.1	1.6	1.6	125.13	-9.0	-19.5	24.5	21.4	3.16	7.775	
1,000.0	998.9	999.1	998.8	1.8	1.8	131.35	-12.3	-22.5	31.1	27.6	3.54	8.808	
1,100.0	1,098.3	1,098.7	1,098.3	2.1	1.9	137.13	-15.6	-25.6	39.2	35.3	3.91	10.025	
1,200.0	1,197.4	1,198.2	1,197.6	2.3	2.1	142.18	-18.9	-28.6	49.0	44.7	4.29	11.415	
1,300.0	1,296.3	1,297.4	1,296.8	2.6	2.3	146.45	-22.3	-31.7	60.4	55.7	4.66	12.954	
1,400.0	1,394.9	1,396.5	1,395.7	2.9	2.5	150.03	-25.6	-34.7	73.5	68.5	5.03	14.621	
1,500.0	1,493.3	1,495.3	1,494.4	3.3	2.7	153.02	-28.9	-37.7	88.4	83.0	5.39	16.395	
1,600.0	1,591.2	1,593.8	1,592.8	3.6	2.9	155.52	-32.1	-40.8	105.1	99.3	5.76	18.257	
1,700.0	1,688.9	1,692.0	1,690.9	4.0	3.1	157.64	-35.4	-43.8	123.5	117.3	6.11	20.194	
1,800.0	1,786.1	1,789.9	1,788.7	4.5	3.2	159.44	-38.7	-46.8	143.5	137.1	6.47	22.184	
1,900.0	1,883.2	1,887.6	1,886.4	4.9	3.4	160.91	-41.9	-49.8	164.2	157.4	6.83	24.031	
2,000.0	1,980.4	1,985.4	1,984.0	5.3	3.6	162.05	-45.2	-52.8	184.9	177.8	7.20	25.700	
2,100.0	2,077.5	2,083.1	2,081.7	5.7	3.8	162.96	-48.5	-55.8	205.8	198.2	7.56	27.215	
2,200.0	2,174.6	2,180.9	2,179.4	6.2	4.0	163.71	-51.7	-58.8	226.6	218.7	7.93	28.593	
2,300.0	2,271.7	2,278.7	2,277.0	6.6	4.2	164.33	-55.0	-61.8	247.5	239.2	8.29	29.853	
2,400.0	2,368.8	2,376.4	2,374.7	7.0	4.4	164.85	-58.2	-64.8	268.4	259.7	8.66	31.009	
2,500.0	2,466.0	2,474.2	2,472.3	7.5	4.5	165.30	-61.5	-67.8	289.3	280.3	9.02	32.072	
2,600.0	2,563.1	2,572.0	2,570.0	7.9	4.7	165.68	-64.8	-70.8	310.2	300.9	9.39	33.054	
2,700.0	2,660.2	2,669.7	2,667.7	8.4	4.9	166.02	-68.0	-73.8	331.2	321.4	9.75	33.963	
2,800.0	2,757.3	2,767.5	2,765.3	8.8	5.1	166.32	-71.3	-76.8	352.2	342.0	10.12	34.806	
2,900.0	2,854.4	2,865.3	2,863.0	9.2	5.3	166.58	-74.5	-79.8	373.1	362.6	10.48	35.592	
3,000.0	2,951.6	2,963.0	2,960.7	9.7	5.5	166.82	-77.8	-82.8	394.1	383.2	10.85	36.324	
3,100.0	3,048.7	3,060.8	3,058.3	10.1	5.7	167.03	-81.1	-85.8	415.1	403.9	11.22	37.010	
3,200.0	3,145.8	3,158.5	3,156.0	10.6	5.9	167.22	-84.3	-88.8	436.1	424.5	11.58	37.652	
3,300.0	3,242.9	3,256.3	3,253.7	11.0	6.0	167.39	-87.6	-91.8	457.0	445.1	11.95	38.255	
3,400.0	3,340.1	3,354.1	3,351.3	11.5	6.2	167.55	-90.8	-94.8	478.0	465.7	12.31	38.822	
3,500.0	3,437.2	3,451.8	3,449.0	11.9	6.4	167.70	-94.1	-97.8	499.0	486.4	12.68	39.357	
8,700.0	7,788.0	7,666.9	7,654.7	17.4	14.2	-68.53	-186.6	-226.9	477.7	448.0	29.66	16.107	
8,800.0	7,788.0	7,700.0	7,685.1	16.8	14.2	-73.15	-173.5	-227.8	418.9	389.3	29.62	14.140	
8,900.0	7,788.0	7,725.5	7,708.0	16.4	14.2	-76.77	-162.3	-228.5	374.4	344.9	29.51	12.687	
9,000.0	7,788.0	7,767.1	7,744.1	16.1	14.2	-82.68	-141.7	-229.6	348.7	319.1	29.58	11.786	
9,076.3	7,788.0	7,807.2	7,777.5	16.1	14.3	-88.24	-119.5	-230.7	342.8	313.2	29.66	11.559	
9,100.0	7,788.0	7,821.5	7,789.0	16.1	14.3	-90.16	-111.0	-231.0	343.4	313.7	29.65	11.580	
9,200.0	7,788.0	7,894.1	7,843.9	16.2	14.3	-99.21	-63.6	-232.7	355.7	326.2	29.58	12.025	
9,300.0	7,788.0	7,991.7	7,907.5	16.5	14.5	-109.02	10.2	-234.7	378.5	349.2	29.33	12.905	
9,400.0	7,788.0	8,120.7	7,970.6	17.0	14.9	-117.65	122.4	-236.6	402.0	372.8	29.20	13.768	
9,500.0	7,788.0	8,279.3	8,011.6	17.6	15.8	-122.59	275.1	-237.9	416.2	386.4	29.87	13.935	
9,600.0	7,788.0	8,408.7	8,016.0	18.4	16.9	-123.08	404.2	-238.0	417.7	386.3	31.39	13.305	
9,700.0	7,788.0	8,508.7	8,016.0	19.3	17.9	-123.08	504.2	-238.0	417.7	384.7	33.01	12.654	
9,800.0	7,788.0	8,608.7	8,016.0	20.3	19.0	-123.08	604.2	-238.0	417.7	382.9	34.80	12.004	
9,900.0	7,788.0	8,708.7	8,016.0	21.5	20.2	-123.08	704.2	-238.0	417.7	381.0	36.74	11.370	
10,000.0	7,788.0	8,808.7	8,016.0	22.7	21.5	-123.08	804.2	-238.0	417.7	378.9	38.80	10.765	
10,100.0	7,788.0	8,908.7	8,016.0	23.9	22.8	-123.08	904.2	-238.0	417.7	376.7	40.98	10.194	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3D-29H-M168 - 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
10,200.0	7,788.0	9,008.7	8,016.0	25.3	24.2	-123.08	1,004.2	-238.0	417.7	374.5	43.24	9.660	
10,300.0	7,788.0	9,108.7	8,016.0	26.7	25.6	-123.08	1,104.2	-238.0	417.7	372.1	45.58	9.163	
10,400.0	7,788.0	9,208.7	8,016.0	28.1	27.1	-123.08	1,204.2	-238.0	417.7	369.7	47.99	8.703	
10,500.0	7,788.0	9,308.7	8,016.0	29.5	28.6	-123.08	1,304.2	-238.0	417.7	367.2	50.46	8.278	
10,600.0	7,788.0	9,408.7	8,016.0	31.0	30.1	-123.08	1,404.2	-238.0	417.7	364.7	52.97	7.885	
10,700.0	7,788.0	9,508.7	8,016.0	32.5	31.6	-123.08	1,504.2	-238.0	417.7	362.2	55.53	7.522	
10,800.0	7,788.0	9,608.7	8,016.0	34.1	33.2	-123.08	1,604.2	-238.0	417.7	359.6	58.13	7.186	
10,900.0	7,788.0	9,708.7	8,016.0	35.6	34.8	-123.08	1,704.2	-238.0	417.7	357.0	60.75	6.876	
11,000.0	7,788.0	9,808.7	8,016.0	37.2	36.4	-123.08	1,804.2	-238.0	417.7	354.3	63.41	6.588	
11,100.0	7,788.0	9,908.7	8,016.0	38.8	38.0	-123.08	1,904.2	-238.0	417.7	351.6	66.08	6.321	
11,200.0	7,788.0	10,008.7	8,016.0	40.4	39.7	-123.08	2,004.2	-238.0	417.7	348.9	68.79	6.073	
11,300.0	7,788.0	10,108.7	8,016.0	42.0	41.3	-123.08	2,104.2	-238.0	417.7	346.2	71.51	5.842	
11,400.0	7,788.0	10,208.7	8,016.0	43.6	42.9	-123.08	2,204.2	-238.0	417.7	343.5	74.24	5.626	
11,500.0	7,788.0	10,308.7	8,016.0	45.3	44.6	-123.08	2,304.2	-238.0	417.7	340.7	77.00	5.425	
11,600.0	7,788.0	10,408.7	8,016.0	46.9	46.3	-123.08	2,404.2	-238.0	417.7	337.9	79.76	5.237	
11,700.0	7,788.0	10,508.7	8,016.0	48.6	47.9	-123.08	2,504.2	-238.0	417.7	335.2	82.54	5.061	
11,800.0	7,788.0	10,608.7	8,016.0	50.2	49.6	-123.08	2,604.2	-238.0	417.7	332.4	85.33	4.895	
11,900.0	7,788.0	10,708.7	8,016.0	51.9	51.3	-123.08	2,704.2	-238.0	417.7	329.6	88.13	4.740	
12,000.0	7,788.0	10,808.7	8,016.0	53.6	53.0	-123.08	2,804.2	-238.0	417.7	326.8	90.94	4.593	
12,100.0	7,788.0	10,908.7	8,016.0	55.2	54.7	-123.08	2,904.2	-238.0	417.7	323.9	93.76	4.455	
12,200.0	7,788.0	11,008.7	8,016.0	56.9	56.4	-123.08	3,004.2	-238.0	417.7	321.1	96.59	4.325	
12,300.0	7,788.0	11,108.7	8,016.0	58.6	58.1	-123.08	3,104.2	-238.0	417.7	318.3	99.42	4.201	
12,400.0	7,788.0	11,208.7	8,016.0	60.3	59.8	-123.08	3,204.2	-238.0	417.7	315.4	102.26	4.085	
12,500.0	7,788.0	11,308.7	8,016.0	62.0	61.5	-123.08	3,304.2	-238.0	417.7	312.6	105.10	3.974	
12,600.0	7,788.0	11,408.7	8,016.0	63.7	63.2	-123.08	3,404.2	-238.0	417.7	309.8	107.95	3.869	
12,700.0	7,788.0	11,508.7	8,016.0	65.4	64.9	-123.08	3,504.2	-238.0	417.7	306.9	110.81	3.770	
12,800.0	7,788.0	11,608.7	8,016.0	67.1	66.6	-123.08	3,604.2	-238.0	417.7	304.0	113.67	3.675	
12,900.0	7,788.0	11,708.7	8,016.0	68.8	68.3	-123.08	3,704.2	-238.0	417.7	301.2	116.54	3.584	
13,000.0	7,788.0	11,808.7	8,016.0	70.5	70.0	-123.08	3,804.2	-238.0	417.7	298.3	119.40	3.498	
13,100.0	7,788.0	11,908.7	8,016.0	72.2	71.7	-123.08	3,904.2	-238.0	417.7	295.4	122.28	3.416	
13,200.0	7,788.0	12,008.7	8,016.0	73.9	73.5	-123.08	4,004.2	-238.0	417.7	292.6	125.15	3.338	
13,300.0	7,788.0	12,108.7	8,016.0	75.6	75.2	-123.08	4,104.2	-238.0	417.7	289.7	128.03	3.263	
13,400.0	7,788.0	12,208.7	8,016.0	77.3	76.9	-123.08	4,204.2	-238.0	417.7	286.8	130.91	3.191	
13,500.0	7,788.0	12,308.7	8,016.0	79.1	78.6	-123.08	4,304.2	-238.0	417.7	283.9	133.80	3.122	
13,600.0	7,788.0	12,408.7	8,016.0	80.8	80.3	-123.08	4,404.2	-238.0	417.7	281.0	136.69	3.056	
13,700.0	7,788.0	12,508.7	8,016.0	82.5	82.1	-123.08	4,504.2	-238.0	417.7	278.1	139.58	2.993	
13,800.0	7,788.0	12,608.7	8,016.0	84.2	83.8	-123.08	4,604.2	-238.0	417.7	275.2	142.47	2.932	
13,900.0	7,788.0	12,708.7	8,016.0	85.9	85.5	-123.08	4,704.2	-238.0	417.7	272.3	145.36	2.874	
14,000.0	7,788.0	12,808.7	8,016.0	87.7	87.3	-123.08	4,804.2	-238.0	417.7	269.4	148.26	2.817	
14,100.0	7,788.0	12,908.7	8,016.0	89.4	89.0	-123.08	4,904.2	-238.0	417.7	266.5	151.16	2.763	
14,200.0	7,788.0	13,008.7	8,016.0	91.1	90.7	-123.08	5,004.2	-238.0	417.7	263.6	154.06	2.711	
14,300.0	7,788.0	13,108.7	8,016.0	92.8	92.5	-123.08	5,104.2	-238.0	417.7	260.7	156.96	2.661	
14,400.0	7,788.0	13,208.7	8,016.0	94.6	94.2	-123.08	5,204.2	-238.0	417.7	257.8	159.87	2.613	
14,500.0	7,788.0	13,308.7	8,016.0	96.3	95.9	-123.08	5,304.2	-238.0	417.7	254.9	162.77	2.566	
14,600.0	7,788.0	13,408.7	8,016.0	98.0	97.7	-123.08	5,404.2	-238.0	417.7	252.0	165.68	2.521	
14,700.0	7,788.0	13,508.7	8,016.0	99.8	99.4	-123.08	5,504.2	-238.0	417.7	249.1	168.59	2.478	
14,800.0	7,788.0	13,608.7	8,016.0	101.5	101.1	-123.08	5,604.2	-238.0	417.7	246.2	171.50	2.436	
14,900.0	7,788.0	13,708.7	8,016.0	103.2	102.9	-123.08	5,704.2	-238.0	417.7	243.3	174.41	2.395	
15,000.0	7,788.0	13,808.7	8,016.0	105.0	104.6	-123.08	5,804.2	-238.0	417.7	240.4	177.32	2.356	
15,100.0	7,788.0	13,908.7	8,016.0	106.7	106.3	-123.08	5,904.2	-238.0	417.7	237.5	180.23	2.318	
15,200.0	7,788.0	14,008.7	8,016.0	108.4	108.1	-123.08	6,004.2	-238.0	417.7	234.6	183.15	2.281	
15,300.0	7,788.0	14,108.7	8,016.0	110.2	109.8	-123.08	6,104.2	-238.0	417.7	231.6	186.06	2.245	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3D-29H-M168 - 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
15,400.0	7,788.0	14,208.7	8,016.0	111.9	111.6	-123.08	6,204.2	-238.0	417.7	228.7	188.98	2.210	
15,500.0	7,788.0	14,308.7	8,016.0	113.6	113.3	-123.08	6,304.2	-238.0	417.7	225.8	191.90	2.177	
15,600.0	7,788.0	14,408.7	8,016.0	115.4	115.0	-123.08	6,404.2	-238.0	417.7	222.9	194.81	2.144	
15,700.0	7,788.0	14,508.7	8,016.0	117.1	116.8	-123.08	6,504.2	-238.0	417.7	220.0	197.73	2.112	
15,800.0	7,788.0	14,608.7	8,016.0	118.8	118.5	-123.08	6,604.2	-238.0	417.7	217.1	200.65	2.082	
15,900.0	7,788.0	14,708.7	8,016.0	120.6	120.3	-123.08	6,704.2	-238.0	417.7	214.1	203.57	2.052	
16,000.0	7,788.0	14,808.7	8,016.0	122.3	122.0	-123.08	6,804.2	-238.0	417.7	211.2	206.49	2.023	
16,100.0	7,788.0	14,908.7	8,016.0	124.1	123.7	-123.08	6,904.2	-238.0	417.7	208.3	209.42	1.995	
16,200.0	7,788.0	15,008.7	8,016.0	125.8	125.5	-123.08	7,004.2	-238.0	417.7	205.4	212.34	1.967	
16,300.0	7,788.0	15,108.7	8,016.0	127.5	127.2	-123.08	7,104.2	-238.0	417.7	202.4	215.26	1.940	
16,400.0	7,788.0	15,208.7	8,016.0	129.3	129.0	-123.08	7,204.2	-238.0	417.7	199.5	218.19	1.914	
16,500.0	7,788.0	15,308.7	8,016.0	131.0	130.7	-123.08	7,304.2	-238.0	417.7	196.6	221.11	1.889	
16,600.0	7,788.0	15,408.7	8,016.0	132.8	132.5	-123.08	7,404.2	-238.0	417.7	193.7	224.04	1.864	
16,624.7	7,788.0	15,433.4	8,016.0	133.2	132.9	-123.08	7,428.9	-238.0	417.7	192.9	224.76	1.858	SF
16,700.0	7,788.0	15,450.3	8,016.0	134.5	133.2	-123.08	7,445.8	-238.0	421.8	195.7	226.11	1.865	
16,747.3	7,788.0	15,450.3	8,016.0	135.3	133.2	-123.08	7,445.8	-238.0	430.9	204.1	226.80	1.900	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3F-29H-M168 - 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	90.06	0.0	8.4	8.4				
100.0	100.0	100.0	100.0	0.2	0.2	90.06	0.0	8.4	8.4	8.1	0.30	27.668	
200.0	200.0	200.0	200.0	0.3	0.3	90.06	0.0	8.4	8.4	7.7	0.65	12.872	
300.0	300.0	300.0	300.0	0.5	0.5	90.06	0.0	8.4	8.4	7.4	1.00	8.387	CC
400.0	400.0	399.9	399.9	0.7	0.7	95.52	-0.8	8.7	8.7	7.4	1.35	6.447	ES
500.0	500.0	499.9	499.8	0.9	0.9	-71.48	-3.3	9.5	9.7	8.0	1.70	5.714	
600.0	600.0	599.7	599.6	1.0	1.0	-65.44	-7.5	10.8	11.3	9.3	2.06	5.489	
700.0	699.9	699.6	699.2	1.2	1.2	-62.00	-13.3	12.7	13.3	10.9	2.43	5.491	
800.0	799.7	799.4	798.7	1.4	1.4	-60.42	-20.7	15.1	15.7	12.9	2.81	5.598	
900.0	899.4	899.1	898.0	1.6	1.7	-60.06	-29.8	18.1	18.5	15.3	3.21	5.754	
1,000.0	998.9	998.8	997.1	1.8	1.9	-60.49	-40.5	21.6	21.6	17.9	3.64	5.925	
1,100.0	1,098.3	1,098.5	1,095.9	2.1	2.2	-61.38	-52.8	25.6	25.0	20.9	4.10	6.096	
1,200.0	1,197.4	1,198.1	1,194.4	2.3	2.5	-62.54	-66.8	30.1	28.7	24.1	4.59	6.256	
1,300.0	1,296.3	1,297.7	1,292.6	2.6	2.8	-63.84	-82.4	35.2	32.9	27.7	5.14	6.398	
1,400.0	1,394.9	1,397.2	1,390.5	2.9	3.1	-65.19	-99.6	40.8	37.4	31.6	5.73	6.521	
1,500.0	1,493.3	1,496.6	1,488.0	3.3	3.5	-66.54	-118.4	46.9	42.2	35.9	6.37	6.625	
1,600.0	1,591.2	1,596.0	1,585.0	3.6	3.9	-67.86	-138.8	53.5	47.5	40.4	7.08	6.710	
1,700.0	1,688.9	1,695.4	1,681.7	4.0	4.3	-69.14	-160.8	60.6	53.1	45.3	7.83	6.779	
1,800.0	1,786.1	1,795.3	1,778.6	4.5	4.7	-71.25	-183.5	68.0	58.5	49.9	8.66	6.756	
1,900.0	1,883.2	1,895.1	1,875.6	4.9	5.2	-73.49	-206.1	75.4	63.9	54.3	9.53	6.704	
2,000.0	1,980.4	1,994.9	1,972.5	5.3	5.6	-75.38	-228.7	82.7	69.3	58.9	10.40	6.663	
2,100.0	2,077.5	2,094.8	2,069.5	5.7	6.0	-77.00	-251.4	90.1	74.8	63.5	11.28	6.629	
2,200.0	2,174.6	2,194.6	2,166.4	6.2	6.5	-78.39	-274.0	97.4	80.3	68.1	12.16	6.602	
2,300.0	2,271.7	2,294.4	2,263.4	6.6	6.9	-79.61	-296.7	104.8	85.9	72.8	13.05	6.581	
2,400.0	2,368.8	2,394.2	2,360.3	7.0	7.4	-80.68	-319.3	112.2	91.5	77.5	13.94	6.563	
2,500.0	2,466.0	2,494.1	2,457.3	7.5	7.8	-81.62	-342.0	119.5	97.1	82.3	14.83	6.549	
2,600.0	2,563.1	2,593.9	2,554.2	7.9	8.2	-82.46	-364.6	126.9	102.8	87.0	15.72	6.537	
2,700.0	2,660.2	2,693.7	2,651.2	8.4	8.7	-83.21	-387.3	134.2	108.4	91.8	16.62	6.527	
2,800.0	2,757.3	2,793.6	2,748.1	8.8	9.1	-83.89	-409.9	141.6	114.1	96.6	17.51	6.519	
2,900.0	2,854.4	2,893.4	2,845.1	9.2	9.6	-84.50	-432.6	149.0	119.9	101.4	18.40	6.512	
3,000.0	2,951.6	2,993.2	2,942.0	9.7	10.0	-85.06	-455.2	156.3	125.6	106.3	19.30	6.506	
3,100.0	3,048.7	3,093.0	3,039.0	10.1	10.5	-85.56	-477.9	163.7	131.3	111.1	20.20	6.502	
3,200.0	3,145.8	3,192.9	3,135.9	10.6	10.9	-86.03	-500.5	171.0	137.1	116.0	21.09	6.498	
3,300.0	3,242.9	3,292.7	3,232.9	11.0	11.4	-86.46	-523.2	178.4	142.8	120.8	21.99	6.495	
3,400.0	3,340.1	3,392.5	3,329.8	11.5	11.8	-86.85	-545.8	185.7	148.6	125.7	22.88	6.492	
3,500.0	3,437.2	3,492.4	3,426.7	11.9	12.3	-87.22	-568.5	193.1	154.3	130.5	23.78	6.489	
3,600.0	3,534.3	3,592.2	3,523.7	12.4	12.7	-87.56	-591.1	200.5	160.1	135.4	24.68	6.487	
3,700.0	3,631.4	3,692.0	3,620.6	12.8	13.2	-87.87	-613.7	207.8	165.9	140.3	25.57	6.486	
3,800.0	3,728.5	3,791.9	3,717.6	13.3	13.6	-88.17	-636.4	215.2	171.7	145.2	26.47	6.485	
3,900.0	3,825.7	3,891.4	3,814.2	13.7	14.1	-88.44	-659.0	222.5	177.5	150.1	27.37	6.484	
4,000.0	3,922.8	3,988.3	3,908.4	14.2	14.5	-88.81	-680.5	230.6	184.2	156.0	28.25	6.522	
4,100.0	4,019.9	4,084.9	4,002.3	14.6	14.9	-89.32	-701.4	240.1	192.6	163.4	29.13	6.611	
4,200.0	4,117.0	4,181.5	4,096.1	15.0	15.4	-89.94	-721.5	251.1	202.5	172.5	30.00	6.749	
4,300.0	4,214.1	4,280.9	4,192.6	15.5	15.8	-90.59	-742.0	263.1	213.1	182.2	30.90	6.898	
4,400.0	4,311.3	4,380.3	4,289.2	15.9	16.2	-91.18	-762.4	275.1	223.8	192.0	31.79	7.041	
4,500.0	4,408.4	4,479.7	4,385.7	16.4	16.7	-91.72	-782.9	287.1	234.5	201.8	32.67	7.176	
4,600.0	4,505.5	4,579.1	4,482.2	16.8	17.1	-92.20	-803.3	299.1	245.2	211.6	33.56	7.306	
4,700.0	4,602.6	4,678.5	4,578.8	17.3	17.6	-92.65	-823.8	311.0	255.9	221.4	34.44	7.429	
4,800.0	4,699.7	4,778.0	4,675.3	17.7	18.0	-93.06	-844.2	323.0	266.6	231.3	35.33	7.547	
4,900.0	4,796.9	4,877.4	4,771.8	18.2	18.5	-93.44	-864.7	335.0	277.4	241.2	36.21	7.660	
5,000.0	4,894.0	4,976.8	4,868.4	18.6	18.9	-93.79	-885.1	347.0	288.1	251.0	37.09	7.767	
5,100.0	4,991.1	5,076.2	4,964.9	19.1	19.3	-94.12	-905.6	359.0	298.9	260.9	37.98	7.870	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3F-29H-M168 - 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
5,200.0	5,088.2	5,175.6	5,061.5	19.5	19.8	-94.42	-926.0	371.0	309.7	270.8	38.86	7.969	
5,300.0	5,185.3	5,275.0	5,158.0	20.0	20.2	-94.70	-946.5	382.9	320.4	280.7	39.74	8.064	
5,400.0	5,282.5	5,374.4	5,254.5	20.4	20.7	-94.97	-966.9	394.9	331.2	290.6	40.62	8.155	
5,500.0	5,379.6	5,473.8	5,351.1	20.9	21.1	-95.21	-987.4	406.9	342.0	300.5	41.50	8.242	
5,600.0	5,476.7	5,573.2	5,447.6	21.3	21.6	-95.45	-1,007.8	418.9	352.8	310.5	42.38	8.325	
5,700.0	5,573.8	5,672.6	5,544.2	21.8	22.0	-95.67	-1,028.3	430.9	363.6	320.4	43.26	8.406	
5,800.0	5,670.9	5,772.0	5,640.7	22.2	22.5	-95.87	-1,048.7	442.8	374.5	330.3	44.14	8.483	
5,900.0	5,768.1	5,871.4	5,737.2	22.7	22.9	-96.07	-1,069.2	454.8	385.3	340.2	45.02	8.558	
6,000.0	5,865.2	5,970.8	5,833.8	23.1	23.4	-96.25	-1,089.6	466.8	396.1	350.2	45.90	8.629	
6,100.0	5,962.3	6,070.2	5,930.3	23.6	23.8	-96.42	-1,110.0	478.8	406.9	360.1	46.78	8.698	
6,200.0	6,059.4	6,169.6	6,026.8	24.0	24.3	-96.59	-1,130.5	490.8	417.7	370.1	47.66	8.765	
6,300.0	6,156.6	6,269.0	6,123.4	24.5	24.7	-96.75	-1,150.9	502.8	428.6	380.0	48.54	8.829	
6,400.0	6,253.7	6,368.4	6,219.9	24.9	25.1	-96.89	-1,171.4	514.7	439.4	390.0	49.42	8.891	
6,500.0	6,350.8	6,467.8	6,316.5	25.4	25.6	-97.04	-1,191.8	526.7	450.2	399.9	50.30	8.951	
6,600.0	6,447.9	6,567.2	6,413.0	25.8	26.0	-97.17	-1,212.3	538.7	461.1	409.9	51.18	9.009	
6,700.0	6,545.0	6,666.6	6,509.5	26.3	26.5	-97.30	-1,232.7	550.7	471.9	419.9	52.06	9.066	
6,800.0	6,642.2	6,766.1	6,606.1	26.7	26.9	-97.42	-1,253.2	562.7	482.8	429.8	52.94	9.120	
6,900.0	6,739.3	6,865.5	6,702.6	27.2	27.4	-97.54	-1,273.6	574.7	493.6	439.8	53.82	9.172	
12,300.0	7,788.0	12,530.4	8,016.0	58.6	60.3	117.81	3,152.7	544.2	491.0	385.2	105.83	4.640	
12,400.0	7,788.0	12,629.8	8,016.0	60.3	61.9	118.43	3,251.5	533.1	481.2	372.9	108.25	4.445	
12,500.0	7,788.0	12,729.1	8,016.0	62.0	63.5	119.08	3,350.2	522.0	471.4	360.8	110.61	4.262	
12,600.0	7,788.0	12,828.5	8,016.0	63.7	65.1	119.75	3,449.0	510.9	461.7	348.8	112.89	4.090	
12,700.0	7,788.0	12,927.9	8,016.0	65.4	66.8	120.45	3,547.7	499.9	452.0	336.9	115.10	3.927	
12,800.0	7,788.0	13,027.3	8,016.0	67.1	68.4	121.18	3,646.5	488.8	442.4	325.2	117.23	3.774	
12,900.0	7,788.0	13,126.6	8,016.0	68.8	70.1	121.94	3,745.2	477.7	432.9	313.7	119.26	3.630	
13,000.0	7,788.0	13,226.0	8,016.0	70.5	71.7	122.74	3,844.0	466.6	423.5	302.3	121.19	3.494	
13,100.0	7,788.0	13,322.8	8,016.0	72.2	73.4	123.54	3,940.2	456.0	414.3	291.3	123.01	3.368	
13,200.0	7,788.0	13,416.8	8,016.0	73.9	74.9	124.24	4,033.7	447.0	406.3	281.4	124.85	3.254	
13,300.0	7,788.0	13,511.0	8,016.0	75.6	76.5	124.84	4,127.6	439.5	399.7	273.0	126.78	3.153	
13,400.0	7,788.0	13,605.4	8,016.0	77.3	78.1	125.34	4,221.9	433.5	394.6	265.8	128.81	3.063	
13,500.0	7,788.0	13,700.0	8,016.0	79.1	79.8	125.71	4,316.4	429.1	390.8	259.8	130.99	2.983	
13,600.0	7,788.0	13,794.8	8,016.0	80.8	81.4	125.96	4,411.1	426.3	388.3	255.0	133.33	2.913	
13,700.0	7,788.0	13,889.6	8,016.0	82.5	83.0	126.07	4,505.9	425.0	387.2	251.4	135.87	2.850	
13,732.1	7,788.0	13,920.0	8,016.0	83.1	83.5	126.08	4,536.4	424.9	387.2	250.4	136.73	2.832	
13,800.0	7,788.0	13,984.4	8,016.0	84.2	84.6	126.05	4,600.7	425.3	387.5	248.9	138.61	2.795	
13,900.0	7,788.0	14,084.1	8,016.0	85.9	86.3	125.94	4,700.4	426.5	388.5	246.9	141.56	2.744	
14,000.0	7,788.0	14,184.1	8,016.0	87.7	88.0	125.84	4,800.4	427.7	389.4	244.9	144.53	2.695	
14,100.0	7,788.0	14,284.1	8,016.0	89.4	89.8	125.73	4,900.4	428.9	390.4	242.9	147.50	2.647	
14,200.0	7,788.0	14,384.1	8,016.0	91.1	91.5	125.63	5,000.3	430.1	391.4	241.0	150.48	2.601	
14,300.0	7,788.0	14,484.0	8,016.0	92.8	93.2	125.52	5,100.3	431.4	392.4	239.0	153.47	2.557	
14,400.0	7,788.0	14,584.0	8,016.0	94.6	94.9	125.42	5,200.3	432.6	393.4	237.0	156.47	2.514	
14,500.0	7,788.0	14,684.0	8,016.0	96.3	96.7	125.32	5,300.3	433.8	394.4	234.9	159.47	2.473	
14,600.0	7,788.0	14,784.0	8,016.0	98.0	98.4	125.21	5,400.3	435.0	395.4	232.9	162.48	2.434	
14,700.0	7,788.0	14,884.0	8,016.0	99.8	100.1	125.11	5,500.3	436.3	396.4	230.9	165.50	2.395	
14,800.0	7,788.0	14,984.0	8,016.0	101.5	101.8	125.01	5,600.3	437.5	397.4	228.9	168.53	2.358	
14,900.0	7,788.0	15,084.0	8,016.0	103.2	103.6	124.91	5,700.2	438.7	398.4	226.9	171.56	2.322	
15,000.0	7,788.0	15,184.0	8,016.0	105.0	105.3	124.81	5,800.2	439.9	399.4	224.8	174.60	2.288	
15,100.0	7,788.0	15,284.0	8,016.0	106.7	107.0	124.71	5,900.2	441.1	400.4	222.8	177.64	2.254	
15,200.0	7,788.0	15,384.0	8,016.0	108.4	108.8	124.61	6,000.2	442.4	401.4	220.7	180.70	2.222	
15,300.0	7,788.0	15,484.0	8,016.0	110.2	110.5	124.51	6,100.2	443.6	402.4	218.7	183.76	2.190	
15,400.0	7,788.0	15,584.0	8,016.0	111.9	112.2	124.41	6,200.2	444.8	403.4	216.6	186.82	2.159	
15,500.0	7,788.0	15,684.0	8,016.0	113.6	114.0	124.32	6,300.1	446.0	404.4	214.6	189.90	2.130	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3F-29H-M168 - 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
15,600.0	7,788.0	15,784.0	8,016.0	115.4	115.7	124.22	6,400.1	447.3	405.5	212.5	192.98	2.101	
15,700.0	7,788.0	15,883.9	8,016.0	117.1	117.4	124.12	6,500.1	448.5	406.5	210.4	196.06	2.073	
15,800.0	7,788.0	15,983.9	8,016.0	118.8	119.2	124.03	6,600.1	449.7	407.5	208.3	199.15	2.046	
15,900.0	7,788.0	16,083.9	8,016.0	120.6	120.9	123.93	6,700.1	450.9	408.5	206.2	202.25	2.020	
16,000.0	7,788.0	16,183.9	8,016.0	122.3	122.6	123.83	6,800.1	452.1	409.5	204.2	205.35	1.994	
16,100.0	7,788.0	16,283.9	8,016.0	124.1	124.4	123.74	6,900.1	453.4	410.5	202.1	208.46	1.969	
16,200.0	7,788.0	16,383.9	8,016.0	125.8	126.1	123.65	7,000.0	454.6	411.5	200.0	211.57	1.945	
16,300.0	7,788.0	16,483.9	8,016.0	127.5	127.8	123.55	7,100.0	455.8	412.6	197.9	214.69	1.922	
16,400.0	7,788.0	16,583.9	8,016.0	129.3	129.6	123.46	7,200.0	457.0	413.6	195.8	217.82	1.899	
16,500.0	7,788.0	16,683.9	8,016.0	131.0	131.3	123.36	7,300.0	458.2	414.6	193.7	220.95	1.876	
16,600.0	7,788.0	16,783.9	8,016.0	132.8	133.0	123.27	7,400.0	459.5	415.6	191.5	224.08	1.855	
16,700.0	7,788.0	16,883.9	8,016.0	134.5	134.8	123.18	7,500.0	460.7	416.6	189.4	227.22	1.834	
16,747.3	7,788.0	16,931.1	8,016.0	135.3	135.6	123.14	7,547.2	461.3	417.1	188.4	228.71	1.824	SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - Waste Connections 3G-29H-M168 - 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	1.0	1.0	0.0	0.0	90.05	0.0	19.6	19.6				
100.0	100.0	101.0	101.0	0.2	0.2	90.05	0.0	19.6	19.6	19.3	0.31	64.189	
166.3	166.3	167.3	167.3	0.3	0.3	90.05	0.0	19.6	19.6	19.1	0.54	36.511	CC
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.65	29.955	ES
300.0	300.0	300.8	300.8	0.5	0.5	91.92	-0.7	20.2	20.2	19.2	1.00	20.136	
400.0	400.0	400.5	400.4	0.7	0.7	96.84	-2.6	21.9	22.1	20.8	1.35	16.327	
500.0	500.0	500.0	499.9	0.9	0.9	-74.64	-5.9	24.8	25.3	23.6	1.71	14.819	
600.0	600.0	599.6	599.3	1.0	1.1	-72.41	-10.4	28.9	29.5	27.5	2.07	14.286	
700.0	699.9	699.0	698.4	1.2	1.3	-71.89	-16.2	34.1	34.7	32.2	2.44	14.230	SF
800.0	799.7	798.3	797.2	1.4	1.5	-72.45	-23.3	40.4	40.7	37.9	2.82	14.423	
900.0	899.4	897.4	895.7	1.6	1.8	-73.66	-31.6	47.9	47.6	44.4	3.23	14.747	
1,000.0	998.9	996.4	993.8	1.8	2.0	-75.19	-41.2	56.4	55.5	51.8	3.67	15.130	
1,100.0	1,098.3	1,095.2	1,091.5	2.1	2.3	-76.86	-52.0	66.1	64.4	60.2	4.14	15.531	
1,200.0	1,197.4	1,194.2	1,189.2	2.3	2.6	-78.65	-64.0	76.8	74.1	69.4	4.66	15.901	
1,300.0	1,296.3	1,293.6	1,287.3	2.6	3.0	-81.06	-76.3	87.8	83.7	78.5	5.22	16.045	
1,400.0	1,394.9	1,393.1	1,385.4	2.9	3.3	-84.02	-88.5	98.7	93.4	87.5	5.83	16.015	
1,500.0	1,493.3	1,492.4	1,483.4	3.3	3.6	-87.38	-100.7	109.6	103.1	96.6	6.49	15.890	
1,600.0	1,591.2	1,591.7	1,581.3	3.6	3.9	-91.00	-112.9	120.5	113.1	106.0	7.19	15.738	
1,700.0	1,688.9	1,690.8	1,679.0	4.0	4.3	-94.81	-125.1	131.4	123.7	115.8	7.93	15.609	
1,800.0	1,786.1	1,789.7	1,776.6	4.5	4.6	-98.72	-137.3	142.3	135.1	126.4	8.69	15.546	
1,900.0	1,883.2	1,888.6	1,874.2	4.9	4.9	-102.30	-149.4	153.1	147.0	137.6	9.44	15.575	
2,000.0	1,980.4	1,987.5	1,971.7	5.3	5.2	-105.32	-161.6	164.0	159.5	149.3	10.18	15.666	
2,100.0	2,077.5	2,086.4	2,069.2	5.7	5.6	-107.91	-173.7	174.9	172.4	161.4	10.91	15.795	
2,200.0	2,174.6	2,185.3	2,166.8	6.2	5.9	-110.13	-185.9	185.7	185.5	173.9	11.63	15.947	
2,300.0	2,271.7	2,284.2	2,264.3	6.6	6.2	-112.06	-198.0	196.6	198.9	186.5	12.34	16.111	
2,400.0	2,368.8	2,383.1	2,361.8	7.0	6.6	-113.75	-210.2	207.5	212.5	199.4	13.05	16.281	
2,500.0	2,466.0	2,482.0	2,459.4	7.5	6.9	-115.23	-222.4	218.3	226.2	212.5	13.75	16.452	
2,600.0	2,563.1	2,580.9	2,556.9	7.9	7.2	-116.54	-234.5	229.2	240.1	225.6	14.44	16.621	
2,700.0	2,660.2	2,679.7	2,654.5	8.4	7.5	-117.71	-246.7	240.1	254.1	238.9	15.13	16.786	
2,800.0	2,757.3	2,778.6	2,752.0	8.8	7.9	-118.76	-258.8	250.9	268.1	252.3	15.82	16.947	
2,900.0	2,854.4	2,877.5	2,849.5	9.2	8.2	-119.70	-271.0	261.8	282.3	265.8	16.51	17.102	
3,000.0	2,951.6	2,976.4	2,947.1	9.7	8.5	-120.55	-283.1	272.7	296.5	279.3	17.19	17.251	
3,100.0	3,048.7	3,075.3	3,044.6	10.1	8.9	-121.33	-295.3	283.5	310.8	292.9	17.87	17.394	
3,200.0	3,145.8	3,174.2	3,142.2	10.6	9.2	-122.04	-307.5	294.4	325.1	306.6	18.54	17.531	
3,300.0	3,242.9	3,273.1	3,239.7	11.0	9.5	-122.68	-319.6	305.3	339.5	320.3	19.22	17.663	
3,400.0	3,340.1	3,372.0	3,337.2	11.5	9.9	-123.28	-331.8	316.1	353.9	334.0	19.89	17.788	
3,500.0	3,437.2	3,470.9	3,434.8	11.9	10.2	-123.82	-343.9	327.0	368.3	347.8	20.57	17.908	
3,600.0	3,534.3	3,569.8	3,532.3	12.4	10.5	-124.33	-356.1	337.9	382.8	361.6	21.24	18.023	
3,700.0	3,631.4	3,668.7	3,629.8	12.8	10.9	-124.80	-368.2	348.7	397.3	375.4	21.91	18.133	
3,800.0	3,728.5	3,767.6	3,727.4	13.3	11.2	-125.24	-380.4	359.6	411.8	389.3	22.58	18.238	
3,900.0	3,825.7	3,866.4	3,824.9	13.7	11.5	-125.64	-392.6	370.5	426.4	403.1	23.25	18.338	
4,000.0	3,922.8	3,965.3	3,922.5	14.2	11.9	-126.02	-404.7	381.3	441.0	417.0	23.92	18.435	
4,100.0	4,019.9	4,064.2	4,020.0	14.6	12.2	-126.38	-416.9	392.2	455.6	431.0	24.59	18.527	
4,200.0	4,117.0	4,163.1	4,117.5	15.0	12.5	-126.71	-429.0	403.1	470.2	444.9	25.26	18.615	
4,300.0	4,214.1	4,262.0	4,215.1	15.5	12.9	-127.02	-441.2	413.9	484.8	458.9	25.92	18.700	
4,400.0	4,311.3	4,360.9	4,312.6	15.9	13.2	-127.32	-453.4	424.8	499.4	472.8	26.59	18.781	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design 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
16,300.0	7,788.0	11,327.4	7,673.9	127.5	87.9	-32.51	7,524.7	25.3	450.3	356.9	93.47	4.818	
16,400.0	7,788.0	11,306.2	7,673.9	129.3	87.4	-25.85	7,528.9	46.1	358.2	276.7	81.51	4.394	
16,500.0	7,788.0	11,285.8	7,673.9	131.0	86.9	-18.64	7,532.9	66.1	270.1	202.0	68.12	3.965	
16,600.0	7,788.0	11,266.3	7,673.8	132.8	86.4	-11.14	7,536.7	85.2	191.9	136.8	55.11	3.482	
16,700.0	7,788.0	11,247.0	7,673.7	134.5	85.9	-3.30	7,540.5	104.1	141.2	95.4	45.87	3.079	
16,737.7	7,788.0	11,239.7	7,673.7	135.2	85.8	-0.30	7,541.9	111.3	136.3	91.6	44.75	3.046	CC, ES, SF
16,747.3	7,788.0	11,237.8	7,673.7	135.3	85.7	0.47	7,542.3	113.1	136.6	91.9	44.74	3.054	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - WILLIAM PELTIER 22-20 (EXISTING) - ENCANA WELL -

Survey Program: 0-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
16,300.0	7,788.0	7,927.7	7,727.0	127.5	31.0	90.00	7,227.3	593.6	497.1	355.8	141.26	3.519	
16,400.0	7,788.0	7,927.7	7,727.0	129.3	31.0	90.00	7,227.3	593.6	482.2	339.2	143.00	3.372	
16,423.1	7,788.0	7,927.7	7,727.0	129.7	31.0	90.00	7,227.3	593.6	481.6	338.2	143.40	3.359	CC, ES, SF
16,500.0	7,788.0	7,927.7	7,727.0	131.0	31.0	90.00	7,227.3	593.6	487.7	343.0	144.74	3.370	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - WILLIAM PELTIER 2-4-20 (EXISTING) - ENCANA WELL

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
15,300.0	7,788.0	7,826.0	7,727.0	110.2	23.5	-90.00	6,455.0	-165.2	447.1	318.0	129.08	3.464	
15,400.0	7,788.0	7,826.0	7,727.0	111.9	23.5	-90.00	6,455.0	-165.2	373.8	243.0	130.82	2.858	
15,500.0	7,788.0	7,826.0	7,727.0	113.6	23.5	-90.00	6,455.0	-165.2	315.6	183.0	132.55	2.381	
15,600.0	7,788.0	7,826.0	7,727.0	115.4	23.5	-90.00	6,455.0	-165.2	281.8	147.5	134.29	2.099	
15,650.8	7,788.0	7,826.0	7,727.0	116.3	23.5	-90.00	6,455.0	-165.2	277.2	142.0	135.17	2.051	CC, ES, SF
15,700.0	7,788.0	7,826.0	7,727.0	117.1	23.5	-90.00	6,455.0	-165.2	281.5	145.5	136.03	2.070	
15,800.0	7,788.0	7,826.0	7,727.0	118.8	23.5	-90.00	6,455.0	-165.2	314.8	177.0	137.77	2.285	
15,900.0	7,788.0	7,826.0	7,727.0	120.6	23.5	-90.00	6,455.0	-165.2	372.7	233.2	139.50	2.672	
16,000.0	7,788.0	7,826.0	7,727.0	122.3	23.5	-90.00	6,455.0	-165.2	445.8	304.6	141.24	3.157	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Waste Connections 3E-29H-M168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5153.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Waste Connections 3E-29H-M168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5153.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Waste Connections 3E-29H-M168
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.30°