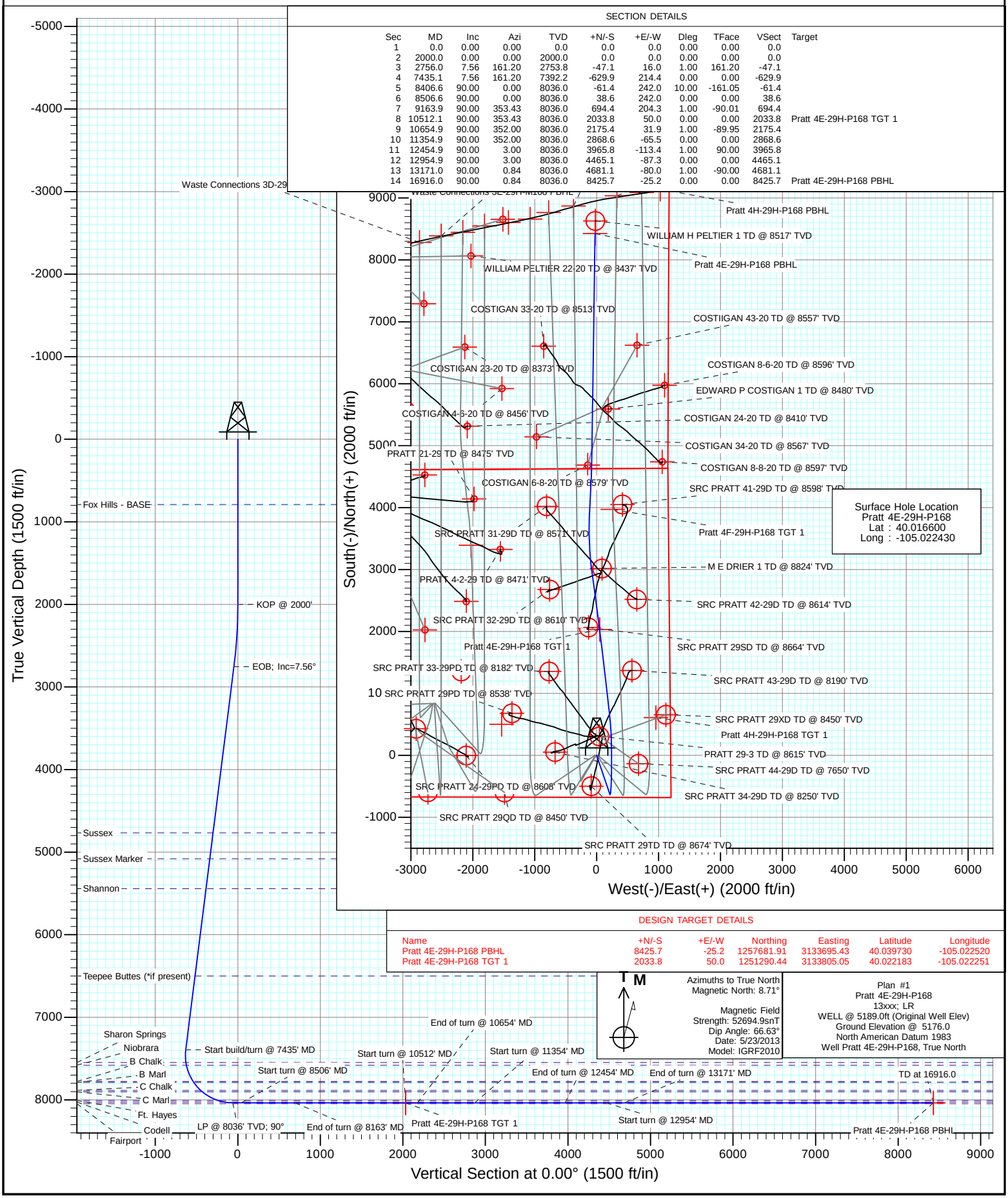
encana

Project: DJ Wattenberg
Site: S29-T1N-R68W (Pratt/Waste Connections)
Well: Pratt 4E-29H-P168
Wellbore: Hz
Design: Plan #1

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2756.0	7.56	161.20	2753.8	-47.1	16.0	1.00	161.20	-47.1	
4	7435.1	7.56	161.20	7392.2	-629.9	214.4	0.00	0.00	-629.9	
5	8406.6	90.00	0.00	8036.0	-61.4	242.0	10.00	-161.05	-61.4	
6	8506.6	90.00	0.00	8036.0	38.6	242.0	0.00	0.00	38.6	
7	9163.9	90.00	353.43	8036.0	694.4	204.3	1.00	-90.01	694.4	
8	10512.1	90.00	353.43	8036.0	2033.8	50.0	0.00	0.00	2033.8	Pratt 4E-29H-P168 TGT 1
9	10654.9	90.00	352.00	8036.0	2175.4	31.9	1.00	-89.95	2175.4	
10	11354.9	90.00	352.00	8036.0	2868.6	-65.5	0.00	0.00	2868.6	
11	12454.9	90.00	3.00	8036.0	3965.8	-113.4	1.00	90.00	3965.8	
12	12954.9	90.00	3.00	8036.0	4465.1	-87.3	0.00	0.00	4465.1	
13	13171.0	90.00	0.84	8036.0	4681.1	-80.0	1.00	-90.00	4681.1	
14	16916.0	90.00	0.84	8036.0	8425.7	-25.2	0.00	0.00	8425.7	Pratt 4E-29H-P168 PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Pratt 4E-29H-P168 PBHL	8425.7	-25.2	1257681.91	3133695.43	40.039730	-105.022520
Pratt 4E-29H-P168 TGT 1	2033.8	50.0	1251290.44	3133805.05	40.022183	-105.022251

T M

Azimuths to True North
Magnetic North: 8.71°

Magnetic Field
Strength: 52694.9snT
Dip Angle: 66.63°
Date: 5/23/2013
Model: IGRF2010

Plan #1
Pratt 4E-29H-P168
13xxx; LR
WELL @ 5189.0ft (Original Well Elev)
Ground Elevation @ 5176.0
North American Datum 1983
Well Pratt 4E-29H-P168, True North

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4E-29H-P168	**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 Pratt 4E-29H-P168

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,249,256.43 ft	**Latitude:**	40.016600
	+E/-W	0.0 ft	**Easting:**	3,133,766.01 ft	**Longitude:**	-105.022430
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,176.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,756.0	7.56	161.20	2,753.8	-47.1	16.0	1.00	1.00	0.00	161.20	
7,435.1	7.56	161.20	7,392.2	-629.9	214.4	0.00	0.00	0.00	0.00	
8,406.6	90.00	0.00	8,036.0	-61.4	242.0	10.00	8.49	-16.59	-161.05	
8,506.6	90.00	0.00	8,036.0	38.6	242.0	0.00	0.00	0.00	0.00	
9,163.9	90.00	353.43	8,036.0	694.4	204.3	1.00	0.00	-1.00	-90.01	
10,512.1	90.00	353.43	8,036.0	2,033.8	50.0	0.00	0.00	0.00	0.00	Pratt 4E-29H-P168 T(
10,654.9	90.00	352.00	8,036.0	2,175.4	31.9	1.00	0.00	-1.00	-89.95	
11,354.9	90.00	352.00	8,036.0	2,868.6	-65.5	0.00	0.00	0.00	0.00	
12,454.9	90.00	3.00	8,036.0	3,965.8	-113.4	1.00	0.00	1.00	90.00	
12,954.9	90.00	3.00	8,036.0	4,465.1	-87.3	0.00	0.00	0.00	0.00	
13,171.0	90.00	0.84	8,036.0	4,681.1	-80.0	1.00	0.00	-1.00	-90.00	
16,916.0	90.00	0.84	8,036.0	8,425.7	-25.2	0.00	0.00	0.00	0.00	Pratt 4E-29H-P168 PI

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4E-29H-P168	**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	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
789.0	0.00	0.00	789.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 2000'
2,100.0	1.00	161.20	2,100.0	-0.8	0.3	-0.8	1.00	1.00	
2,200.0	2.00	161.20	2,200.0	-3.3	1.1	-3.3	1.00	1.00	
2,300.0	3.00	161.20	2,299.9	-7.4	2.5	-7.4	1.00	1.00	
2,400.0	4.00	161.20	2,399.7	-13.2	4.5	-13.2	1.00	1.00	
2,500.0	5.00	161.20	2,499.4	-20.6	7.0	-20.6	1.00	1.00	
2,600.0	6.00	161.20	2,598.9	-29.7	10.1	-29.7	1.00	1.00	
2,700.0	7.00	161.20	2,698.3	-40.4	13.8	-40.4	1.00	1.00	
2,756.0	7.56	161.20	2,753.8	-47.1	16.0	-47.1	1.00	1.00	EOB; Inc=7.56°
2,800.0	7.56	161.20	2,797.4	-52.6	17.9	-52.6	0.00	0.00	
2,900.0	7.56	161.20	2,896.6	-65.1	22.2	-65.1	0.00	0.00	
3,000.0	7.56	161.20	2,995.7	-77.5	26.4	-77.5	0.00	0.00	
3,100.0	7.56	161.20	3,094.8	-90.0	30.6	-90.0	0.00	0.00	
3,200.0	7.56	161.20	3,193.9	-102.4	34.9	-102.4	0.00	0.00	
3,300.0	7.56	161.20	3,293.1	-114.9	39.1	-114.9	0.00	0.00	
3,400.0	7.56	161.20	3,392.2	-127.4	43.4	-127.4	0.00	0.00	
3,500.0	7.56	161.20	3,491.3	-139.8	47.6	-139.8	0.00	0.00	
3,600.0	7.56	161.20	3,590.5	-152.3	51.8	-152.3	0.00	0.00	
3,700.0	7.56	161.20	3,689.6	-164.7	56.1	-164.7	0.00	0.00	
3,800.0	7.56	161.20	3,788.7	-177.2	60.3	-177.2	0.00	0.00	
3,900.0	7.56	161.20	3,887.9	-189.6	64.6	-189.6	0.00	0.00	
4,000.0	7.56	161.20	3,987.0	-202.1	68.8	-202.1	0.00	0.00	
4,100.0	7.56	161.20	4,086.1	-214.5	73.0	-214.5	0.00	0.00	
4,200.0	7.56	161.20	4,185.3	-227.0	77.3	-227.0	0.00	0.00	
4,300.0	7.56	161.20	4,284.4	-239.4	81.5	-239.4	0.00	0.00	
4,400.0	7.56	161.20	4,383.5	-251.9	85.8	-251.9	0.00	0.00	
4,500.0	7.56	161.20	4,482.6	-264.4	90.0	-264.4	0.00	0.00	
4,600.0	7.56	161.20	4,581.8	-276.8	94.2	-276.8	0.00	0.00	
4,700.0	7.56	161.20	4,680.9	-289.3	98.5	-289.3	0.00	0.00	
4,785.8	7.56	161.20	4,766.0	-300.0	102.1	-300.0	0.00	0.00	Sussex
4,800.0	7.56	161.20	4,780.0	-301.7	102.7	-301.7	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4E-29H-P168	**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	7.56	161.20	4,879.2	-314.2	107.0	-314.2	0.00	0.00	
5,000.0	7.56	161.20	4,978.3	-326.6	111.2	-326.6	0.00	0.00	
5,100.0	7.56	161.20	5,077.4	-339.1	115.4	-339.1	0.00	0.00	
5,101.6	7.56	161.20	5,079.0	-339.3	115.5	-339.3	0.00	0.00	Sussex Marker
5,200.0	7.56	161.20	5,176.6	-351.5	119.7	-351.5	0.00	0.00	
5,300.0	7.56	161.20	5,275.7	-364.0	123.9	-364.0	0.00	0.00	
5,400.0	7.56	161.20	5,374.8	-376.4	128.2	-376.4	0.00	0.00	
5,468.8	7.56	161.20	5,443.0	-385.0	131.1	-385.0	0.00	0.00	Shannon
5,500.0	7.56	161.20	5,474.0	-388.9	132.4	-388.9	0.00	0.00	
5,600.0	7.56	161.20	5,573.1	-401.4	136.6	-401.4	0.00	0.00	
5,700.0	7.56	161.20	5,672.2	-413.8	140.9	-413.8	0.00	0.00	
5,800.0	7.56	161.20	5,771.3	-426.3	145.1	-426.3	0.00	0.00	
5,900.0	7.56	161.20	5,870.5	-438.7	149.4	-438.7	0.00	0.00	
6,000.0	7.56	161.20	5,969.6	-451.2	153.6	-451.2	0.00	0.00	
6,100.0	7.56	161.20	6,068.7	-463.6	157.8	-463.6	0.00	0.00	
6,200.0	7.56	161.20	6,167.9	-476.1	162.1	-476.1	0.00	0.00	
6,300.0	7.56	161.20	6,267.0	-488.5	166.3	-488.5	0.00	0.00	
6,400.0	7.56	161.20	6,366.1	-501.0	170.6	-501.0	0.00	0.00	
6,500.0	7.56	161.20	6,465.3	-513.4	174.8	-513.4	0.00	0.00	
6,535.0	7.56	161.20	6,500.0	-517.8	176.3	-517.8	0.00	0.00	Teepee Buttes (*if present)
6,600.0	7.56	161.20	6,564.4	-525.9	179.0	-525.9	0.00	0.00	
6,700.0	7.56	161.20	6,663.5	-538.4	183.3	-538.4	0.00	0.00	
6,800.0	7.56	161.20	6,762.7	-550.8	187.5	-550.8	0.00	0.00	
6,900.0	7.56	161.20	6,861.8	-563.3	191.8	-563.3	0.00	0.00	
7,000.0	7.56	161.20	6,960.9	-575.7	196.0	-575.7	0.00	0.00	
7,100.0	7.56	161.20	7,060.0	-588.2	200.2	-588.2	0.00	0.00	
7,200.0	7.56	161.20	7,159.2	-600.6	204.5	-600.6	0.00	0.00	
7,300.0	7.56	161.20	7,258.3	-613.1	208.7	-613.1	0.00	0.00	
7,400.0	7.56	161.20	7,357.4	-625.5	212.9	-625.5	0.00	0.00	
7,435.1	7.56	161.20	7,392.2	-629.9	214.4	-629.9	0.00	0.00	Start build/turn @ 7435' MD
7,500.0	2.54	105.19	7,456.9	-634.3	217.2	-634.3	10.00	-7.74	
7,590.5	8.73	16.17	7,547.0	-628.2	221.1	-628.2	10.00	6.85	Sharon Springs
7,600.0	9.65	14.57	7,556.4	-626.8	221.5	-626.8	10.00	9.63	
7,624.0	11.99	11.62	7,580.0	-622.4	222.5	-622.4	10.00	9.73	Niobrara
7,700.0	19.48	6.94	7,653.1	-602.1	225.6	-602.1	10.00	9.87	
7,800.0	29.43	4.35	7,744.0	-560.9	229.5	-560.9	10.00	9.94	
7,837.5	33.16	3.75	7,776.0	-541.5	230.9	-541.5	10.00	9.97	B Chalk
7,851.9	34.61	3.55	7,788.0	-533.4	231.4	-533.4	10.00	9.97	B Marl
7,900.0	39.40	2.98	7,826.4	-504.6	233.0	-504.6	10.00	9.97	
7,979.3	47.32	2.26	7,884.0	-450.2	235.5	-450.2	10.00	9.98	C Chalk
8,000.0	49.38	2.10	7,897.7	-434.8	236.1	-434.8	10.00	9.98	
8,006.6	50.04	2.05	7,902.0	-429.7	236.2	-429.7	10.00	9.98	C Marl
8,100.0	59.37	1.45	7,955.9	-353.6	238.5	-353.6	10.00	9.99	
8,200.0	69.36	0.92	7,999.1	-263.6	240.4	-263.6	10.00	9.99	
8,223.6	71.71	0.81	8,007.0	-241.4	240.7	-241.4	10.00	9.99	Ft. Hayes
8,299.6	79.30	0.46	8,026.0	-167.8	241.5	-167.8	10.00	9.99	Codell
8,300.0	79.35	0.46	8,026.1	-167.4	241.5	-167.4	10.00	9.99	
8,400.0	89.34	0.03	8,035.9	-68.1	242.0	-68.1	10.00	9.99	
8,406.6	90.00	0.00	8,036.0	-61.4	242.0	-61.4	10.00	9.99	LP @ 8036' TVD; 90°
8,500.0	90.00	0.00	8,036.0	31.9	242.0	31.9	0.00	0.00	
8,506.6	90.00	0.00	8,036.0	38.6	242.0	38.6	0.00	0.00	Start turn @ 8506' MD
8,600.0	90.00	359.07	8,036.0	131.9	241.2	131.9	1.00	0.00	

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Well:	Pratt 4E-29H-P168	**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
8,700.0	90.00	358.07	8,036.0	231.9	238.7	231.9	1.00	0.00	
8,800.0	90.00	357.07	8,036.0	331.8	234.5	331.8	1.00	0.00	
8,900.0	90.00	356.07	8,036.0	431.6	228.5	431.6	1.00	0.00	
9,000.0	90.00	355.07	8,036.0	531.3	220.7	531.3	1.00	0.00	
9,100.0	90.00	354.07	8,036.0	630.9	211.3	630.9	1.00	0.00	
9,163.9	90.00	353.43	8,036.0	694.4	204.3	694.4	1.00	0.00	End of turn @ 8163' MD
9,200.0	90.00	353.43	8,036.0	730.3	200.2	730.3	0.00	0.00	
9,300.0	90.00	353.43	8,036.0	829.6	188.7	829.6	0.00	0.00	
9,400.0	90.00	353.43	8,036.0	929.0	177.3	929.0	0.00	0.00	
9,500.0	90.00	353.43	8,036.0	1,028.3	165.8	1,028.3	0.00	0.00	
9,600.0	90.00	353.43	8,036.0	1,127.6	154.4	1,127.6	0.00	0.00	
9,700.0	90.00	353.43	8,036.0	1,227.0	143.0	1,227.0	0.00	0.00	
9,800.0	90.00	353.43	8,036.0	1,326.3	131.5	1,326.3	0.00	0.00	
9,900.0	90.00	353.43	8,036.0	1,425.7	120.1	1,425.7	0.00	0.00	
10,000.0	90.00	353.43	8,036.0	1,525.0	108.6	1,525.0	0.00	0.00	
10,100.0	90.00	353.43	8,036.0	1,624.4	97.2	1,624.4	0.00	0.00	
10,200.0	90.00	353.43	8,036.0	1,723.7	85.7	1,723.7	0.00	0.00	
10,300.0	90.00	353.43	8,036.0	1,823.0	74.3	1,823.0	0.00	0.00	
10,400.0	90.00	353.43	8,036.0	1,922.4	62.8	1,922.4	0.00	0.00	
10,500.0	90.00	353.43	8,036.0	2,021.7	51.4	2,021.7	0.00	0.00	
10,512.1	90.00	353.43	8,036.0	2,033.8	50.0	2,033.8	0.00	0.00	Start turn @ 10512' MD - Pratt 4E-29H-P168 T(
10,600.0	90.00	352.55	8,036.0	2,121.0	39.3	2,121.0	1.00	0.00	
10,654.9	90.00	352.00	8,036.0	2,175.4	31.9	2,175.4	1.00	0.00	End of turn @ 10654' MD
10,700.0	90.00	352.00	8,036.0	2,220.0	25.6	2,220.0	0.00	0.00	
10,800.0	90.00	352.00	8,036.0	2,319.1	11.7	2,319.1	0.00	0.00	
10,900.0	90.00	352.00	8,036.0	2,418.1	-2.2	2,418.1	0.00	0.00	
11,000.0	90.00	352.00	8,036.0	2,517.1	-16.1	2,517.1	0.00	0.00	
11,100.0	90.00	352.00	8,036.0	2,616.2	-30.1	2,616.2	0.00	0.00	
11,200.0	90.00	352.00	8,036.0	2,715.2	-44.0	2,715.2	0.00	0.00	
11,300.0	90.00	352.00	8,036.0	2,814.2	-57.9	2,814.2	0.00	0.00	
11,354.9	90.00	352.00	8,036.0	2,868.6	-65.5	2,868.6	0.00	0.00	Start turn @ 11354' MD
11,400.0	90.00	352.45	8,036.0	2,913.3	-71.6	2,913.3	1.00	0.00	
11,500.0	90.00	353.45	8,036.0	3,012.5	-83.9	3,012.5	1.00	0.00	
11,600.0	90.00	354.45	8,036.0	3,111.9	-94.4	3,111.9	1.00	0.00	
11,700.0	90.00	355.45	8,036.0	3,211.6	-103.2	3,211.6	1.00	0.00	
11,800.0	90.00	356.45	8,036.0	3,311.3	-110.3	3,311.3	1.00	0.00	
11,900.0	90.00	357.45	8,036.0	3,411.2	-115.6	3,411.2	1.00	0.00	
12,000.0	90.00	358.45	8,036.0	3,511.1	-119.2	3,511.1	1.00	0.00	
12,100.0	90.00	359.45	8,036.0	3,611.1	-121.0	3,611.1	1.00	0.00	
12,200.0	90.00	0.45	8,036.0	3,711.1	-121.1	3,711.1	1.00	0.00	
12,300.0	90.00	1.45	8,036.0	3,811.1	-119.4	3,811.1	1.00	0.00	
12,400.0	90.00	2.45	8,036.0	3,911.0	-116.0	3,911.0	1.00	0.00	
12,454.9	90.00	3.00	8,036.0	3,965.8	-113.4	3,965.8	1.00	0.00	End of turn @ 12454' MD
12,500.0	90.00	3.00	8,036.0	4,010.9	-111.1	4,010.9	0.00	0.00	
12,600.0	90.00	3.00	8,036.0	4,110.7	-105.8	4,110.7	0.00	0.00	
12,700.0	90.00	3.00	8,036.0	4,210.6	-100.6	4,210.6	0.00	0.00	
12,800.0	90.00	3.00	8,036.0	4,310.5	-95.4	4,310.5	0.00	0.00	
12,900.0	90.00	3.00	8,036.0	4,410.3	-90.1	4,410.3	0.00	0.00	
12,954.9	90.00	3.00	8,036.0	4,465.1	-87.3	4,465.1	0.00	0.00	Start turn @ 12954' MD
13,000.0	90.00	2.55	8,036.0	4,510.2	-85.1	4,510.2	1.00	0.00	
13,100.0	90.00	1.55	8,036.0	4,610.1	-81.5	4,610.1	1.00	0.00	
13,171.0	90.00	0.84	8,036.0	4,681.1	-80.0	4,681.1	1.00	0.00	End of turn @ 13171' MD

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4E-29H-P168	**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
13,200.0	90.00	0.84	8,036.0	4,710.1	-79.6	4,710.1	0.00	0.00	
13,300.0	90.00	0.84	8,036.0	4,810.1	-78.1	4,810.1	0.00	0.00	
13,400.0	90.00	0.84	8,036.0	4,910.1	-76.7	4,910.1	0.00	0.00	
13,500.0	90.00	0.84	8,036.0	5,010.1	-75.2	5,010.1	0.00	0.00	
13,600.0	90.00	0.84	8,036.0	5,110.1	-73.7	5,110.1	0.00	0.00	
13,700.0	90.00	0.84	8,036.0	5,210.1	-72.3	5,210.1	0.00	0.00	
13,800.0	90.00	0.84	8,036.0	5,310.1	-70.8	5,310.1	0.00	0.00	
13,900.0	90.00	0.84	8,036.0	5,410.0	-69.4	5,410.0	0.00	0.00	
14,000.0	90.00	0.84	8,036.0	5,510.0	-67.9	5,510.0	0.00	0.00	
14,100.0	90.00	0.84	8,036.0	5,610.0	-66.4	5,610.0	0.00	0.00	
14,200.0	90.00	0.84	8,036.0	5,710.0	-65.0	5,710.0	0.00	0.00	
14,300.0	90.00	0.84	8,036.0	5,810.0	-63.5	5,810.0	0.00	0.00	
14,400.0	90.00	0.84	8,036.0	5,910.0	-62.0	5,910.0	0.00	0.00	
14,500.0	90.00	0.84	8,036.0	6,010.0	-60.6	6,010.0	0.00	0.00	
14,600.0	90.00	0.84	8,036.0	6,110.0	-59.1	6,110.0	0.00	0.00	
14,700.0	90.00	0.84	8,036.0	6,210.0	-57.6	6,210.0	0.00	0.00	
14,800.0	90.00	0.84	8,036.0	6,309.9	-56.2	6,309.9	0.00	0.00	
14,900.0	90.00	0.84	8,036.0	6,409.9	-54.7	6,409.9	0.00	0.00	
15,000.0	90.00	0.84	8,036.0	6,509.9	-53.3	6,509.9	0.00	0.00	
15,100.0	90.00	0.84	8,036.0	6,609.9	-51.8	6,609.9	0.00	0.00	
15,200.0	90.00	0.84	8,036.0	6,709.9	-50.3	6,709.9	0.00	0.00	
15,300.0	90.00	0.84	8,036.0	6,809.9	-48.9	6,809.9	0.00	0.00	
15,400.0	90.00	0.84	8,036.0	6,909.9	-47.4	6,909.9	0.00	0.00	
15,500.0	90.00	0.84	8,036.0	7,009.9	-45.9	7,009.9	0.00	0.00	
15,600.0	90.00	0.84	8,036.0	7,109.9	-44.5	7,109.9	0.00	0.00	
15,700.0	90.00	0.84	8,036.0	7,209.9	-43.0	7,209.9	0.00	0.00	
15,800.0	90.00	0.84	8,036.0	7,309.8	-41.5	7,309.8	0.00	0.00	
15,900.0	90.00	0.84	8,036.0	7,409.8	-40.1	7,409.8	0.00	0.00	
16,000.0	90.00	0.84	8,036.0	7,509.8	-38.6	7,509.8	0.00	0.00	
16,100.0	90.00	0.84	8,036.0	7,609.8	-37.1	7,609.8	0.00	0.00	
16,200.0	90.00	0.84	8,036.0	7,709.8	-35.7	7,709.8	0.00	0.00	
16,300.0	90.00	0.84	8,036.0	7,809.8	-34.2	7,809.8	0.00	0.00	
16,400.0	90.00	0.84	8,036.0	7,909.8	-32.8	7,909.8	0.00	0.00	
16,500.0	90.00	0.84	8,036.0	8,009.8	-31.3	8,009.8	0.00	0.00	
16,600.0	90.00	0.84	8,036.0	8,109.8	-29.8	8,109.8	0.00	0.00	
16,700.0	90.00	0.84	8,036.0	8,209.7	-28.4	8,209.7	0.00	0.00	
16,800.0	90.00	0.84	8,036.0	8,309.7	-26.9	8,309.7	0.00	0.00	
16,900.0	90.00	0.84	8,036.0	8,409.7	-25.4	8,409.7	0.00	0.00	
16,916.0	90.00	0.84	8,036.0	8,425.7	-25.2	8,425.7	0.00	0.00	TD at 16916.0 - Pratt 4E-29H-P168 PBHL

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site:	S29-T1N-R68W (Pratt/Waste Connections)	**North Reference:**	True
Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Pratt 4E-29H-P168 TGT - plan hits target center - Point	0.00	0.00	8,036.0	2,033.8	50.0	1,251,290.44	3,133,805.05	40.022183	-105.022251
Pratt 4E-29H-P168 PBH - plan hits target center - Point	0.00	0.00	8,036.0	8,425.7	-25.2	1,257,681.91	3,133,695.43	40.039730	-105.022520

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
789.0	789.0	Fox Hills - BASE			
4,785.8	4,766.0	Sussex			
5,101.6	5,079.0	Sussex Marker			
5,468.8	5,443.0	Shannon			
6,535.0	6,500.0	Teepee Buttes (*if present)			
7,590.5	7,547.0	Sharon Springs			
7,624.0	7,580.0	Niobrara			
7,837.5	7,776.0	B Chalk			
7,851.9	7,788.0	B Marl			
7,979.3	7,884.0	C Chalk			
8,006.6	7,902.0	C Marl			
8,223.6	8,007.0	Ft. Hayes			
8,299.6	8,026.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
2,000.0	2,000.0	0.0	0.0	KOP @ 2000'
2,756.0	2,753.8	-47.1	16.0	EOB; Inc=7.56°
7,435.1	7,392.2	-629.9	214.4	Start build/turn @ 7435' MD
8,406.6	8,036.0	-61.4	242.0	LP @ 8036' TVD; 90°
8,506.6	8,036.0	38.6	242.0	Start turn @ 8506' MD
9,163.9	8,036.0	694.4	204.3	End of turn @ 8163' MD
10,512.1	8,036.0	2,033.8	50.0	Start turn @ 10512' MD
10,654.9	8,036.0	2,175.4	31.9	End of turn @ 10654' MD
11,354.9	8,036.0	2,868.6	-65.5	Start turn @ 11354' MD
12,454.9	8,036.0	3,965.8	-113.4	End of turn @ 12454' MD
12,954.9	8,036.0	4,465.1	-87.3	Start turn @ 12954' MD
13,171.0	8,036.0	4,681.1	-80.0	End of turn @ 13171' MD
16,916.0	8,036.0	8,425.7	-25.2	TD at 16916.0

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S29-T1N-R68W (Pratt/Waste Connections)
Pratt 4E-29H-P168
Hz
Plan #1

Anticollision Report

31 May, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #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** 5/31/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	16,916.0	Plan #1 (Hz)	MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #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						Out of range
COSTIGAN 24-20 (EXISTING) - ENCANA WELL - ENCA						Out of range
COSTIGAN 33-20 (EXISTING) - ENCANA WELL - ENCA						Out of range
COSTIGAN 34-20 (EXISTING) - ENCANA WELL - 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	13,174.8	8,133.1	64.4	-42.3	0.603	Level 1, CC, ES, SF
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	14,086.4	8,059.0	254.3	138.9	2.204	CC, ES
EDWARD P COSTIGAN 1 (EXISTING) - ENCANA WELL	14,100.0	8,059.0	254.6	139.0	2.203	SF
M E DRIER 1 (EXISTING) - SYNERGY WELL - NO SUR	11,483.7	8,055.0	170.0	99.5	2.412	CC, ES, SF
PRATT 0-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
PRATT 1 (EXISTING) - SYNERGY WELL - NO SURVEY						Out of range
PRATT 12-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 2 (EXISTING) - SYNERGY WELL - NO SURVEY						Out of range
PRATT 2-0-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
PRATT 21-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 22-29 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PRATT 2-4-29 (EXISTING) - ENCANA WELL - PLAN ON						Out of range
PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURV	8,783.4	8,024.0	190.7	160.4	6.286	CC, ES
PRATT 29-3 (EXISTING) - SYNERGY WELL - NO SURV	8,800.0	8,024.0	191.4	160.9	6.286	SF
PRATT 4-2-29 (EXISTING) - ENCANA WELL - SURVEY						Out of range
Pratt 4B-29H-P168 - Hz - Plan #1	300.0	300.0	28.0	27.0	27.958	CC, ES
Pratt 4B-29H-P168 - Hz - Plan #1	700.0	697.8	40.3	37.8	16.696	SF
Pratt 4C-29H-P168 - Hz - Plan #1	400.0	400.0	19.6	18.3	14.513	CC, ES
Pratt 4C-29H-P168 - Hz - Plan #1	12,500.0	12,471.4	498.2	351.6	3.399	SF
Pratt 4D-29H-P168 - Hz - Plan #1	500.0	500.0	8.4	6.7	4.943	CC, ES
Pratt 4D-29H-P168 - Hz - Plan #1	600.0	599.9	8.9	6.8	4.333	SF
Pratt 4F-29H-P168 - Hz - Plan #1	500.0	500.0	11.2	9.5	6.590	CC, ES
Pratt 4F-29H-P168 - Hz - Plan #1	700.0	699.7	13.4	11.0	5.591	SF
Pratt 4G-29H-P168 - Hz - Plan #1	400.0	400.0	19.6	18.3	14.513	CC, ES
Pratt 4G-29H-P168 - Hz - Plan #1	700.0	698.9	26.1	23.7	10.908	SF
PRATT F UNIT 1 (EXISTING) - ENCANA WELL - NO SU						Out of range
SRC PRATT 13-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 14-29D (EXISTING) - SYNERGY WELL - S						Out of range
SRC PRATT 24-29 PD (EXISTING) - SYNERGY WELL -						Out of range
SRC PRATT 29HD (EXISTING) - SYNERGY WELL - PL						Out of range
SRC PRATT 29LD (EXISTING) - SYNERGY WELL - PLA						Out of range
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU	691.9	700.0	309.2	306.5	115.203	CC
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU	700.0	707.4	309.2	306.5	113.310	ES
SRC PRATT 29PD (EXISTING) - SYNERGY WELL - SU	1,800.0	1,726.3	497.9	488.7	54.225	SF
SRC PRATT 29QD (EXISTING) - SYNERGY WELL - PL						Out of range
SRC PRATT 29SD (EXISTING) - SYNERGY WELL - SU	10,555.2	8,191.1	185.9	124.3	3.015	CC, ES, SF
SRC PRATT 29TD (EXISTING) - SYNERGY WELL - SU	2,588.3	2,626.3	20.1	8.4	1.721	CC, ES, SF
SRC PRATT 29XD (EXISTING) - SYNERGY WELL - PLA	200.0	190.0	290.4	289.7	441.308	CC, ES
SRC PRATT 29XD (EXISTING) - SYNERGY WELL - PLA	1,700.0	1,614.6	496.3	490.5	84.860	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 Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #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 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 -	0.0	3.0	340.4			
SRC PRATT 33-29PD (EXISTING) - SYNERGY WELL -	100.0	102.5	340.5	340.2	1,089.737	ES
SRC PRATT 33-29PD (EXISTING) - SYNERGY WELL -	1,900.0	1,803.0	491.2	484.1	69.136	SF
SRC PRATT 34-29D (EXISTING) - SYNERGY WELL - S	2,128.9	2,133.5	285.4	277.4	35.421	CC, ES
SRC PRATT 34-29D (EXISTING) - SYNERGY WELL - S	2,600.0	2,590.8	328.1	317.4	30.680	SF
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	0.0	4.0	312.0			
SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - S	200.0	203.6	312.1	311.4	471.447	ES
SRC PRATT 43-29D (EXISTING) - SYNERGY WELL - S	9,900.0	8,181.4	450.8	398.0	8.536	SF
SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - P	1,528.4	1,523.3	280.2	274.7	51.264	CC, ES
SRC PRATT 44-29D (EXISTING) - SYNERGY WELL - P	3,900.0	3,869.7	495.9	478.4	28.269	SF
Waste Connections 3A-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3B-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3C-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3D-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3E-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3F-29H-M168 - Hz - Plan #1						Out of range
Waste Connections 3G-29H-M168 - Hz - Plan #1						Out of range
WILLIAM H PELTIER 1 (EXISTING) - VESSELS WELL -	16,916.0	8,033.0	202.9	38.4	1.233	Level 2, CC, ES, SF
WILLIAM H PELTIER 2 (EXISTING) - ENCANA WELL - P						Out of range
WILLIAM H PELTIER 2 (EXISTING) - ENCANA WELL - S						Out of range
WILLIAM PELTIER 11-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 12-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 12-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 1A-20H (EXISTING) - ENCANA WEL						Out of range
WILLIAM PELTIER 2-0-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 22-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 2-4-20 (EXISTING) - ENCANA WELL						Out of range
WILLIAM PELTIER 4-2-20 (EXISTING) - ENCANA WELL						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - COSTIGAN 6-8-20 (EXISTING) - ENCANA 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
12,700.0	8,036.0	8,133.1	8,065.0	77.4	21.6	-90.00	4,686.1	-144.2	477.5	379.0	98.46	4.849	
12,800.0	8,036.0	8,133.1	8,065.0	79.1	21.6	-90.00	4,686.1	-144.2	378.8	278.6	100.19	3.781	
12,900.0	8,036.0	8,133.1	8,065.0	80.8	21.6	-90.00	4,686.1	-144.2	281.0	179.1	101.91	2.757	
13,000.0	8,036.0	8,133.1	8,065.0	82.6	21.6	-90.00	4,686.1	-144.2	185.6	81.9	103.66	1.790	
13,100.0	8,036.0	8,133.1	8,065.0	84.3	21.6	-90.00	4,686.1	-144.2	98.5	-6.9	105.40	0.934	Level 1
13,174.8	8,036.0	8,133.1	8,065.0	85.6	21.6	-90.00	4,686.1	-144.2	64.4	-42.3	106.70	0.603	Level 1, CC, ES, SF
13,200.0	8,036.0	8,133.1	8,065.0	86.0	21.6	-90.00	4,686.1	-144.2	68.9	-38.2	107.13	0.643	Level 1
13,300.0	8,036.0	8,133.1	8,065.0	87.7	21.6	-90.00	4,686.1	-144.2	140.5	31.7	108.85	1.291	Level 3
13,400.0	8,036.0	8,133.1	8,065.0	89.5	21.6	-90.00	4,686.1	-144.2	234.0	123.4	110.58	2.116	
13,500.0	8,036.0	8,133.1	8,065.0	91.2	21.6	-90.00	4,686.1	-144.2	331.3	218.9	112.31	2.949	
13,600.0	8,036.0	8,133.1	8,065.0	92.9	21.6	-90.00	4,686.1	-144.2	429.8	315.8	114.04	3.769	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 8480-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,700.0	8,036.0	8,059.0	8,059.0	94.6	14.1	90.00	5,592.8	187.6	462.6	353.9	108.67	4.257	
13,800.0	8,036.0	8,059.0	8,059.0	96.4	14.1	90.00	5,592.8	187.6	383.0	272.6	110.40	3.469	
13,900.0	8,036.0	8,059.0	8,059.0	98.1	14.1	90.00	5,592.8	187.6	315.3	203.2	112.13	2.812	
14,000.0	8,036.0	8,059.0	8,059.0	99.8	14.1	90.00	5,592.8	187.6	268.6	154.7	113.86	2.359	
14,086.4	8,036.0	8,059.0	8,059.0	101.3	14.1	90.00	5,592.8	187.6	254.3	138.9	115.36	2.204	CC, ES
14,100.0	8,036.0	8,059.0	8,059.0	101.6	14.1	90.00	5,592.8	187.6	254.6	139.0	115.59	2.203	SF
14,200.0	8,036.0	8,059.0	8,059.0	103.3	14.1	90.00	5,592.8	187.6	278.5	161.1	117.33	2.373	
14,300.0	8,036.0	8,059.0	8,059.0	105.0	14.1	90.00	5,592.8	187.6	332.0	213.0	119.06	2.789	
14,400.0	8,036.0	8,059.0	8,059.0	106.8	14.1	90.00	5,592.8	187.6	403.7	282.9	120.80	3.342	
14,500.0	8,036.0	8,059.0	8,059.0	108.5	14.1	90.00	5,592.8	187.6	485.5	362.9	122.53	3.962	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - M E DRIER 1 (EXISTING) - SYNERGY WELL - NO SURV

Offset Site Error: 0.0 ft

Survey Program: 8824-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,100.0	8,036.0	8,055.0	8,055.0	50.1	14.1	90.00	3,016.2	86.8	416.8	352.9	63.86	6.527	
11,200.0	8,036.0	8,055.0	8,055.0	51.8	14.1	90.00	3,016.2	86.8	328.2	262.7	65.55	5.007	
11,300.0	8,036.0	8,055.0	8,055.0	53.5	14.1	90.00	3,016.2	86.8	248.5	181.2	67.25	3.695	
11,400.0	8,036.0	8,055.0	8,055.0	55.2	14.1	90.00	3,016.2	86.8	189.0	120.0	69.00	2.739	
11,483.7	8,036.0	8,055.0	8,055.0	56.6	14.1	90.00	3,016.2	86.8	170.0	99.5	70.49	2.412	CC, ES, SF
11,500.0	8,036.0	8,055.0	8,055.0	56.9	14.1	90.00	3,016.2	86.8	170.8	100.0	70.78	2.412	
11,600.0	8,036.0	8,055.0	8,055.0	58.6	14.1	90.00	3,016.2	86.8	205.0	132.4	72.55	2.825	
11,700.0	8,036.0	8,055.0	8,055.0	60.3	14.1	90.00	3,016.2	86.8	272.5	198.2	74.31	3.668	
11,800.0	8,036.0	8,055.0	8,055.0	62.0	14.1	90.00	3,016.2	86.8	354.9	278.8	76.05	4.666	
11,900.0	8,036.0	8,055.0	8,055.0	63.7	14.1	90.00	3,016.2	86.8	443.8	366.0	77.77	5.707	

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 Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 8615-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	8.33	306.0	44.8	309.5				
100.0	100.0	88.0	88.0	0.2	0.2	8.33	306.0	44.8	309.3	309.0	0.31	1,011.955	
200.0	200.0	188.0	188.0	0.3	0.3	8.33	306.0	44.8	309.3	308.6	0.65	472.411	
300.0	300.0	288.0	288.0	0.5	0.5	8.33	306.0	44.8	309.3	308.3	1.00	308.127	
400.0	400.0	388.0	388.0	0.7	0.7	8.33	306.0	44.8	309.3	307.9	1.35	228.622	
500.0	500.0	488.0	488.0	0.8	0.9	8.33	306.0	44.8	309.3	307.6	1.70	181.731	
600.0	600.0	588.0	588.0	1.0	1.0	8.33	306.0	44.8	309.3	307.2	2.05	150.801	
700.0	700.0	688.0	688.0	1.2	1.2	8.33	306.0	44.8	309.3	306.9	2.40	128.868	
800.0	800.0	788.0	788.0	1.4	1.4	8.33	306.0	44.8	309.3	306.5	2.75	112.505	
900.0	900.0	888.0	888.0	1.5	1.6	8.33	306.0	44.8	309.3	306.2	3.10	99.829	
1,000.0	1,000.0	988.0	988.0	1.7	1.7	8.33	306.0	44.8	309.3	305.8	3.45	89.720	
1,100.0	1,100.0	1,088.0	1,088.0	1.9	1.9	8.33	306.0	44.8	309.3	305.5	3.80	81.471	
1,200.0	1,200.0	1,188.0	1,188.0	2.1	2.1	8.33	306.0	44.8	309.3	305.1	4.15	74.610	
1,300.0	1,300.0	1,288.0	1,288.0	2.2	2.2	8.33	306.0	44.8	309.3	304.8	4.49	68.816	
1,400.0	1,400.0	1,388.0	1,388.0	2.4	2.4	8.33	306.0	44.8	309.3	304.4	4.84	63.856	
1,500.0	1,500.0	1,488.0	1,488.0	2.6	2.6	8.33	306.0	44.8	309.3	304.1	5.19	59.563	
1,600.0	1,600.0	1,588.0	1,588.0	2.8	2.8	8.33	306.0	44.8	309.3	303.7	5.54	55.812	
1,700.0	1,700.0	1,688.0	1,688.0	2.9	2.9	8.33	306.0	44.8	309.3	303.4	5.89	52.504	
1,800.0	1,800.0	1,788.0	1,788.0	3.1	3.1	8.33	306.0	44.8	309.3	303.0	6.24	49.567	
1,900.0	1,900.0	1,888.0	1,888.0	3.3	3.3	8.33	306.0	44.8	309.3	302.7	6.59	46.941	
2,000.0	2,000.0	1,988.0	1,988.0	3.5	3.5	8.33	306.0	44.8	309.3	302.3	6.94	44.579	
2,100.0	2,100.0	2,088.0	2,088.0	3.6	3.6	-152.94	306.0	44.8	310.1	302.8	7.29	42.554	
2,200.0	2,200.0	2,188.0	2,188.0	3.8	3.8	-153.15	306.0	44.8	312.4	304.8	7.63	40.923	
2,300.0	2,299.9	2,287.9	2,287.9	4.0	4.0	-153.49	306.0	44.8	316.3	308.3	7.98	39.635	
2,400.0	2,399.7	2,387.7	2,387.7	4.2	4.2	-153.95	306.0	44.8	321.8	313.4	8.33	38.649	
2,500.0	2,499.4	2,487.4	2,487.4	4.4	4.3	-154.52	306.0	44.8	328.8	320.2	8.67	37.928	
2,600.0	2,598.9	2,586.9	2,586.9	4.6	4.5	-155.18	306.0	44.8	337.5	328.5	9.01	37.445	
2,700.0	2,698.3	2,686.3	2,686.3	4.8	4.7	-155.92	306.0	44.8	347.8	338.5	9.36	37.175	
2,800.0	2,797.4	2,785.4	2,785.4	5.0	4.9	-156.73	306.0	44.8	359.7	350.0	9.70	37.065	
2,900.0	2,896.6	2,884.6	2,884.6	5.2	5.0	-157.53	306.0	44.8	371.8	361.7	10.06	36.970	
3,000.0	2,995.7	2,983.7	2,983.7	5.4	5.2	-158.28	306.0	44.8	384.0	373.6	10.41	36.888	
3,100.0	3,094.8	3,082.8	3,082.8	5.7	5.4	-158.98	306.0	44.8	396.3	385.5	10.76	36.818	
3,200.0	3,193.9	3,181.9	3,181.9	5.9	5.6	-159.64	306.0	44.8	408.6	397.5	11.12	36.757	
3,300.0	3,293.1	3,281.1	3,281.1	6.2	5.7	-160.27	306.0	44.8	421.0	409.5	11.47	36.705	
3,400.0	3,392.2	3,380.2	3,380.2	6.4	5.9	-160.85	306.0	44.8	433.4	421.6	11.82	36.661	
3,500.0	3,491.3	3,479.3	3,479.3	6.7	6.1	-161.41	306.0	44.8	445.8	433.7	12.17	36.623	
3,600.0	3,590.5	3,578.5	3,578.5	6.9	6.2	-161.93	306.0	44.8	458.3	445.8	12.53	36.592	
3,700.0	3,689.6	3,677.6	3,677.6	7.2	6.4	-162.43	306.0	44.8	470.9	458.0	12.88	36.566	
3,800.0	3,788.7	3,776.7	3,776.7	7.4	6.6	-162.90	306.0	44.8	483.4	470.2	13.23	36.545	
3,900.0	3,887.9	3,875.9	3,875.9	7.7	6.8	-163.34	306.0	44.8	496.0	482.5	13.58	36.528	
8,400.0	8,035.9	8,023.9	8,023.9	15.3	14.0	-88.74	306.0	44.8	422.9	394.2	28.65	14.757	
8,500.0	8,036.0	8,024.0	8,024.0	15.4	14.0	-90.00	306.0	44.8	337.6	308.8	28.85	11.702	
8,600.0	8,036.0	8,024.0	8,024.0	15.8	14.0	-90.00	306.0	44.8	262.4	233.2	29.22	8.983	
8,700.0	8,036.0	8,024.0	8,024.0	16.3	14.0	-90.00	306.0	44.8	207.6	177.8	29.76	6.976	
8,783.4	8,036.0	8,024.0	8,024.0	16.9	14.0	-90.00	306.0	44.8	190.7	160.4	30.34	6.286	CC, ES
8,800.0	8,036.0	8,024.0	8,024.0	17.0	14.0	-90.00	306.0	44.8	191.4	160.9	30.45	6.286	SF
8,900.0	8,036.0	8,024.0	8,024.0	17.9	14.0	-90.00	306.0	44.8	222.5	191.2	31.28	7.113	
9,000.0	8,036.0	8,024.0	8,024.0	18.8	14.0	-90.00	306.0	44.8	285.9	253.6	32.23	8.870	
9,100.0	8,036.0	8,024.0	8,024.0	19.9	14.0	-90.00	306.0	44.8	365.0	331.8	33.27	10.971	
9,200.0	8,036.0	8,024.0	8,024.0	21.0	14.0	-90.00	306.0	44.8	451.8	417.4	34.42	13.125	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-28.0	28.0				
100.0	100.0	100.0	100.0	0.2	0.2	-89.95	0.0	-28.0	28.0	27.7	0.30	92.228	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-28.0	28.0	27.4	0.65	42.908	
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	-28.0	28.0	27.0	1.00	27.958	CC, ES
400.0	400.0	399.6	399.6	0.7	0.7	-90.92	-0.5	-28.7	28.7	27.4	1.35	21.273	
500.0	500.0	499.1	499.1	0.8	0.9	-93.56	-1.9	-30.9	30.9	29.2	1.70	18.189	
600.0	600.0	598.5	598.4	1.0	1.0	-97.19	-4.3	-34.4	34.7	32.7	2.05	16.912	
700.0	700.0	697.8	697.4	1.2	1.2	-101.10	-7.7	-39.4	40.3	37.8	2.41	16.696	SF
800.0	800.0	796.7	796.1	1.4	1.4	-104.76	-12.1	-45.8	47.5	44.8	2.77	17.160	
900.0	900.0	895.4	894.4	1.5	1.7	-107.95	-17.4	-53.6	56.6	53.5	3.13	18.079	
1,000.0	1,000.0	993.8	992.1	1.7	1.9	-110.59	-23.6	-62.7	67.5	64.0	3.49	19.313	
1,100.0	1,100.0	1,091.7	1,089.2	1.9	2.2	-112.74	-30.7	-73.2	80.1	76.2	3.86	20.765	
1,200.0	1,200.0	1,189.2	1,185.6	2.1	2.5	-114.48	-38.7	-85.0	94.5	90.2	4.22	22.372	
1,300.0	1,300.0	1,286.1	1,281.3	2.2	2.8	-115.88	-47.6	-98.0	110.5	106.0	4.59	24.088	
1,400.0	1,400.0	1,383.0	1,376.6	2.4	3.1	-117.02	-57.3	-112.4	128.3	123.3	4.96	25.877	
1,500.0	1,500.0	1,481.3	1,473.2	2.6	3.4	-117.92	-67.5	-127.3	146.6	141.3	5.33	27.500	
1,600.0	1,600.0	1,579.6	1,569.8	2.8	3.8	-118.62	-77.7	-142.3	164.9	159.2	5.70	28.915	
1,700.0	1,700.0	1,677.9	1,666.4	2.9	4.1	-119.18	-87.8	-157.2	183.2	177.1	6.07	30.160	
1,800.0	1,800.0	1,776.2	1,763.0	3.1	4.5	-119.64	-98.0	-172.2	201.6	195.1	6.45	31.262	
1,900.0	1,900.0	1,874.5	1,859.6	3.3	4.8	-120.02	-108.2	-187.2	219.9	213.1	6.82	32.245	
2,000.0	2,000.0	1,972.8	1,956.3	3.5	5.2	-120.34	-118.3	-202.1	238.3	231.1	7.19	33.126	
2,100.0	2,100.0	2,071.1	2,052.9	3.6	5.5	78.19	-128.5	-217.1	256.4	249.2	7.24	35.437	
2,200.0	2,200.0	2,169.5	2,149.6	3.8	5.9	78.31	-138.7	-232.1	274.3	266.7	7.59	36.159	
2,300.0	2,299.9	2,267.9	2,246.3	4.0	6.2	78.73	-148.9	-247.0	291.8	283.9	7.94	36.755	
2,400.0	2,399.7	2,366.3	2,343.1	4.2	6.6	79.41	-159.0	-262.0	309.0	300.7	8.30	37.235	
2,500.0	2,499.4	2,464.7	2,439.8	4.4	6.9	80.30	-169.2	-277.0	326.0	317.3	8.67	37.604	
2,600.0	2,598.9	2,563.0	2,536.4	4.6	7.3	81.39	-179.4	-291.9	342.9	333.8	9.05	37.867	
2,700.0	2,698.3	2,661.2	2,632.9	4.8	7.7	82.63	-189.5	-306.9	359.6	350.2	9.46	38.026	
2,800.0	2,797.4	2,759.3	2,729.3	5.0	8.0	84.06	-199.7	-321.8	376.4	366.5	9.88	38.095	
2,900.0	2,896.6	2,857.4	2,825.8	5.2	8.4	85.49	-209.8	-336.7	393.4	383.1	10.32	38.123	
3,000.0	2,995.7	2,955.4	2,922.2	5.4	8.7	86.80	-220.0	-351.7	410.6	399.9	10.77	38.126	
3,100.0	3,094.8	3,053.5	3,018.6	5.7	9.1	88.01	-230.1	-366.6	428.1	416.8	11.23	38.112	
3,200.0	3,193.9	3,151.6	3,115.0	5.9	9.4	89.12	-240.3	-381.5	445.7	434.0	11.70	38.084	
3,300.0	3,293.1	3,249.7	3,211.4	6.2	9.8	90.15	-250.4	-396.5	463.4	451.2	12.18	38.047	
3,400.0	3,392.2	3,347.8	3,307.8	6.4	10.2	91.11	-260.6	-411.4	481.3	468.6	12.67	38.002	
3,500.0	3,491.3	3,445.8	3,404.2	6.7	10.5	91.99	-270.7	-426.3	499.3	486.2	13.16	37.953	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	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	64.560	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-19.6	19.6	19.0	0.65	30.036	
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, ES
500.0	500.0	499.8	499.8	0.8	0.9	-92.07	-0.7	-20.1	20.1	18.4	1.70	11.806	
600.0	600.0	599.6	599.5	1.0	1.0	-97.85	-3.0	-21.4	21.6	19.6	2.05	10.538	
700.0	700.0	699.2	699.1	1.2	1.2	-105.70	-6.7	-23.7	24.6	22.2	2.41	10.220	
800.0	800.0	798.6	798.3	1.4	1.4	-113.79	-11.8	-26.8	29.4	26.6	2.77	10.612	
900.0	900.0	897.9	897.2	1.5	1.6	-120.87	-18.4	-30.9	36.1	32.9	3.13	11.528	
1,000.0	1,000.0	996.8	995.7	1.7	1.8	-126.54	-26.5	-35.8	44.7	41.2	3.49	12.816	
1,100.0	1,100.0	1,095.9	1,094.2	1.9	2.1	-130.83	-35.8	-41.4	55.0	51.2	3.85	14.294	
1,200.0	1,200.0	1,195.2	1,192.9	2.1	2.3	-133.79	-45.2	-47.2	65.7	61.5	4.21	15.604	
1,300.0	1,300.0	1,294.6	1,291.7	2.2	2.5	-135.93	-54.6	-52.9	76.5	71.9	4.57	16.737	
1,400.0	1,400.0	1,394.0	1,390.5	2.4	2.8	-137.53	-64.1	-58.6	87.4	82.4	4.93	17.723	
1,500.0	1,500.0	1,493.4	1,489.2	2.6	3.0	-138.78	-73.5	-64.4	98.3	93.0	5.29	18.585	
1,600.0	1,600.0	1,592.8	1,588.0	2.8	3.3	-139.78	-82.9	-70.1	109.3	103.6	5.65	19.344	
1,700.0	1,700.0	1,692.1	1,686.8	2.9	3.5	-140.60	-92.4	-75.9	120.3	114.2	6.01	20.018	
1,800.0	1,800.0	1,791.5	1,785.5	3.1	3.8	-141.28	-101.8	-81.6	131.3	124.9	6.37	20.619	
1,900.0	1,900.0	1,890.9	1,884.3	3.3	4.0	-141.85	-111.2	-87.4	142.3	135.6	6.72	21.159	
2,000.0	2,000.0	1,990.3	1,983.1	3.5	4.3	-142.34	-120.6	-93.1	153.3	146.2	7.08	21.646	
2,100.0	2,100.0	2,089.7	2,081.9	3.6	4.6	56.20	-130.1	-98.8	163.9	156.6	7.28	22.524	
2,200.0	2,200.0	2,189.2	2,180.8	3.8	4.8	56.45	-139.5	-104.6	173.5	165.9	7.63	22.743	
2,300.0	2,299.9	2,288.8	2,279.8	4.0	5.1	57.13	-149.0	-110.4	182.2	174.2	7.98	22.814	
2,400.0	2,399.7	2,388.5	2,378.8	4.2	5.3	58.20	-158.4	-116.1	189.9	181.6	8.35	22.756	
2,500.0	2,499.4	2,488.1	2,477.8	4.4	5.6	59.62	-167.9	-121.9	196.9	188.2	8.72	22.584	
2,600.0	2,598.9	2,587.7	2,576.8	4.6	5.8	61.37	-177.3	-127.6	203.1	194.0	9.10	22.314	
2,700.0	2,698.3	2,687.3	2,675.7	4.8	6.1	63.45	-186.8	-133.4	208.8	199.2	9.51	21.960	
2,800.0	2,797.4	2,786.7	2,774.6	5.0	6.4	65.81	-196.2	-139.1	214.0	204.1	9.93	21.549	
2,900.0	2,896.6	2,886.2	2,873.4	5.2	6.6	68.14	-205.7	-144.9	219.5	209.2	10.37	21.162	
3,000.0	2,995.7	2,985.6	2,972.3	5.4	6.9	70.36	-215.1	-150.6	225.4	214.6	10.83	20.812	
3,100.0	3,094.8	3,085.1	3,071.1	5.7	7.1	72.47	-224.5	-156.4	231.6	220.3	11.30	20.497	
3,200.0	3,193.9	3,184.5	3,169.9	5.9	7.4	74.46	-234.0	-162.1	238.1	226.3	11.78	20.213	
3,300.0	3,293.1	3,284.0	3,268.8	6.2	7.6	76.35	-243.4	-167.9	244.8	232.6	12.27	19.957	
3,400.0	3,392.2	3,383.4	3,367.6	6.4	7.9	78.13	-252.8	-173.6	251.9	239.1	12.77	19.729	
3,500.0	3,491.3	3,482.9	3,466.4	6.7	8.2	79.81	-262.3	-179.4	259.1	245.8	13.27	19.524	
3,600.0	3,590.5	3,582.4	3,565.3	6.9	8.4	81.41	-271.7	-185.1	266.5	252.8	13.78	19.342	
3,700.0	3,689.6	3,681.8	3,664.1	7.2	8.7	82.91	-281.1	-190.9	274.2	259.9	14.30	19.179	
3,800.0	3,788.7	3,781.3	3,763.0	7.4	8.9	84.34	-290.6	-196.6	282.0	267.2	14.82	19.035	
3,900.0	3,887.9	3,880.7	3,861.8	7.7	9.2	85.68	-300.0	-202.4	290.0	274.7	15.34	18.907	
4,000.0	3,987.0	3,980.2	3,960.6	7.9	9.4	86.96	-309.5	-208.1	298.2	282.3	15.86	18.794	
4,100.0	4,086.1	4,079.6	4,059.5	8.2	9.7	88.16	-318.9	-213.9	306.4	290.1	16.39	18.694	
4,200.0	4,185.3	4,179.1	4,158.3	8.5	10.0	89.31	-328.3	-219.6	314.9	297.9	16.92	18.606	
4,300.0	4,284.4	4,278.5	4,257.2	8.7	10.2	90.39	-337.8	-225.4	323.4	305.9	17.45	18.529	
4,400.0	4,383.5	4,378.0	4,356.0	9.0	10.5	91.41	-347.2	-231.1	332.0	314.0	17.98	18.462	
4,500.0	4,482.6	4,477.4	4,454.8	9.3	10.7	92.39	-356.6	-236.8	340.8	322.2	18.52	18.403	
4,600.0	4,581.8	4,576.9	4,553.7	9.6	11.0	93.31	-366.1	-242.6	349.6	330.5	19.05	18.352	
4,700.0	4,680.9	4,676.3	4,652.5	9.8	11.3	94.19	-375.5	-248.3	358.5	338.9	19.58	18.308	
4,800.0	4,780.0	4,775.8	4,751.3	10.1	11.5	95.03	-385.0	-254.1	367.5	347.4	20.11	18.271	
4,900.0	4,879.2	4,875.3	4,850.2	10.4	11.8	95.83	-394.4	-259.8	376.6	355.9	20.65	18.238	
5,000.0	4,978.3	4,974.7	4,949.0	10.7	12.0	96.59	-403.8	-265.6	385.7	364.5	21.18	18.211	
5,100.0	5,077.4	5,074.2	5,047.9	10.9	12.3	97.31	-413.3	-271.3	394.9	373.2	21.71	18.188	

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 Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,176.6	5,173.6	5,146.7	11.2	12.6	98.00	-422.7	-277.1	404.2	381.9	22.25	18.170	
5,300.0	5,275.7	5,273.1	5,245.5	11.5	12.8	98.66	-432.1	-282.8	413.5	390.7	22.78	18.155	
5,400.0	5,374.8	5,372.5	5,344.4	11.8	13.1	99.30	-441.6	-288.6	422.9	399.6	23.31	18.143	
5,500.0	5,474.0	5,472.0	5,443.2	12.0	13.3	99.90	-451.0	-294.3	432.3	408.5	23.84	18.134	
5,600.0	5,573.1	5,571.4	5,542.0	12.3	13.6	100.48	-460.4	-300.1	441.8	417.4	24.37	18.127	
5,700.0	5,672.2	5,670.9	5,640.9	12.6	13.9	101.03	-469.9	-305.8	451.3	426.4	24.90	18.123	
5,800.0	5,771.3	5,770.3	5,739.7	12.9	14.1	101.56	-479.3	-311.6	460.8	435.4	25.43	18.121	
5,900.0	5,870.5	5,869.8	5,838.6	13.1	14.4	102.07	-488.8	-317.3	470.4	444.5	25.96	18.121	
6,000.0	5,969.6	5,969.2	5,937.4	13.4	14.6	102.56	-498.2	-323.1	480.1	453.6	26.49	18.122	
6,100.0	6,068.7	6,068.7	6,036.2	13.7	14.9	103.03	-507.6	-328.8	489.7	462.7	27.02	18.125	
6,200.0	6,167.9	6,168.2	6,135.1	14.0	15.1	103.48	-517.1	-334.6	499.4	471.9	27.55	18.130	
11,400.0	8,036.0	11,373.1	8,036.0	55.2	55.5	-90.00	2,895.8	-570.6	499.3	388.9	110.39	4.523	
11,500.0	8,036.0	11,472.7	8,036.0	56.9	57.2	-90.00	2,995.4	-574.1	490.5	376.7	113.81	4.310	
11,600.0	8,036.0	11,572.4	8,036.0	58.6	58.9	-90.00	3,095.1	-577.6	483.4	366.2	117.20	4.125	
11,700.0	8,036.0	11,672.3	8,036.0	60.3	60.6	-90.00	3,194.9	-581.1	478.1	357.6	120.57	3.965	
11,800.0	8,036.0	11,772.2	8,036.0	62.0	62.3	-90.00	3,294.7	-584.6	474.5	350.6	123.92	3.830	
11,900.0	8,036.0	11,872.2	8,036.0	63.7	63.9	-90.00	3,394.7	-588.0	472.7	345.5	127.23	3.715	
11,954.9	8,036.0	11,927.1	8,036.0	64.6	64.9	-90.00	3,449.5	-590.0	472.5	343.4	129.04	3.661	
12,000.0	8,036.0	11,972.2	8,036.0	65.4	65.6	-90.00	3,494.6	-591.5	472.6	342.1	130.52	3.621	
12,100.0	8,036.0	12,072.2	8,036.0	67.1	67.3	-90.00	3,594.5	-595.0	474.3	340.5	133.77	3.546	
12,200.0	8,036.0	12,172.1	8,036.0	68.8	69.0	-90.00	3,694.4	-598.5	477.7	340.7	136.98	3.487	
12,300.0	8,036.0	12,272.0	8,036.0	70.5	70.7	-90.00	3,794.2	-602.0	482.8	342.7	140.16	3.445	
12,400.0	8,036.0	12,371.7	8,036.0	72.2	72.4	-90.00	3,893.9	-605.5	489.7	346.4	143.30	3.417	
12,500.0	8,036.0	12,471.4	8,036.0	74.0	74.2	-90.00	3,993.5	-609.0	498.2	351.6	146.56	3.399	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.94	0.0	-8.4	8.4				
100.0	100.0	100.0	100.0	0.2	0.2	-89.94	0.0	-8.4	8.4	8.1	0.30	27.669	
200.0	200.0	200.0	200.0	0.3	0.3	-89.94	0.0	-8.4	8.4	7.7	0.65	12.873	
300.0	300.0	300.0	300.0	0.5	0.5	-89.94	0.0	-8.4	8.4	7.4	1.00	8.387	
400.0	400.0	400.0	400.0	0.7	0.7	-89.94	0.0	-8.4	8.4	7.1	1.35	6.220	
500.0	500.0	500.0	500.0	0.8	0.8	-89.94	0.0	-8.4	8.4	6.7	1.70	4.943	CC, ES
600.0	600.0	599.9	599.9	1.0	1.0	-94.85	-0.8	-8.8	8.9	6.8	2.05	4.333	SF
700.0	700.0	699.8	699.7	1.2	1.2	-106.56	-3.0	-10.2	10.6	8.2	2.40	4.425	
800.0	800.0	799.5	799.4	1.4	1.4	-118.80	-6.8	-12.4	14.2	11.4	2.75	5.142	
900.0	900.0	899.0	898.7	1.5	1.6	-128.00	-12.1	-15.5	19.7	16.6	3.11	6.339	
1,000.0	1,000.0	998.6	998.0	1.7	1.8	-133.94	-18.6	-19.3	26.8	23.4	3.46	7.757	
1,100.0	1,100.0	1,098.3	1,097.4	1.9	2.0	-137.41	-25.2	-23.1	34.3	30.5	3.81	8.984	
1,200.0	1,200.0	1,198.1	1,196.9	2.1	2.2	-139.63	-31.7	-27.0	41.8	37.6	4.17	10.023	
1,300.0	1,300.0	1,297.8	1,296.3	2.2	2.4	-141.18	-38.3	-30.8	49.3	44.8	4.52	10.909	
1,400.0	1,400.0	1,397.5	1,395.7	2.4	2.6	-142.32	-44.9	-34.7	56.9	52.0	4.87	11.671	
1,500.0	1,500.0	1,497.2	1,495.1	2.6	2.8	-143.18	-51.5	-38.5	64.5	59.3	5.23	12.334	
1,600.0	1,600.0	1,596.9	1,594.5	2.8	3.0	-143.87	-58.0	-42.4	72.1	66.5	5.58	12.915	
1,700.0	1,700.0	1,696.6	1,693.9	2.9	3.2	-144.43	-64.6	-46.2	79.7	73.8	5.93	13.428	
1,800.0	1,800.0	1,796.3	1,793.3	3.1	3.5	-144.88	-71.2	-50.1	87.3	81.0	6.29	13.884	
1,900.0	1,900.0	1,896.0	1,892.8	3.3	3.7	-145.27	-77.8	-53.9	94.9	88.3	6.64	14.293	
2,000.0	2,000.0	1,995.7	1,992.2	3.5	3.9	-145.60	-84.4	-57.8	102.5	95.6	6.99	14.661	
2,100.0	2,100.0	2,095.5	2,091.6	3.6	4.1	53.23	-90.9	-61.6	109.7	102.4	7.28	15.064	
2,200.0	2,200.0	2,195.3	2,191.1	3.8	4.3	53.95	-97.5	-65.5	115.7	108.1	7.63	15.167	
2,300.0	2,299.9	2,295.1	2,290.7	4.0	4.5	55.27	-104.1	-69.3	120.8	112.8	7.98	15.132	
2,400.0	2,399.7	2,394.9	2,390.2	4.2	4.8	57.16	-110.7	-73.2	125.0	116.7	8.34	14.984	
2,500.0	2,499.4	2,494.7	2,489.7	4.4	5.0	59.59	-117.3	-77.0	128.5	119.7	8.71	14.745	
2,600.0	2,598.9	2,594.4	2,589.1	4.6	5.2	62.56	-123.9	-80.9	131.3	122.2	9.09	14.438	
2,700.0	2,698.3	2,694.1	2,688.5	4.8	5.4	66.07	-130.4	-84.7	133.8	124.3	9.50	14.085	
2,800.0	2,797.4	2,793.6	2,787.7	5.0	5.6	70.06	-137.0	-88.6	136.2	126.3	9.93	13.721	
2,900.0	2,896.6	2,893.1	2,886.9	5.2	5.8	74.01	-143.6	-92.4	139.2	128.8	10.37	13.419	
3,000.0	2,995.7	2,992.6	2,986.1	5.4	6.1	77.78	-150.1	-96.3	142.9	132.0	10.84	13.182	
3,100.0	3,094.8	3,092.1	3,085.3	5.7	6.3	81.36	-156.7	-100.1	147.1	135.8	11.31	13.005	
3,200.0	3,193.9	3,191.6	3,184.5	5.9	6.5	84.72	-163.3	-103.9	151.9	140.1	11.79	12.878	
3,300.0	3,293.1	3,291.1	3,283.8	6.2	6.7	87.86	-169.8	-107.8	157.1	144.8	12.28	12.795	
3,400.0	3,392.2	3,390.6	3,383.0	6.4	6.9	90.80	-176.4	-111.6	162.8	150.0	12.77	12.749	
3,500.0	3,491.3	3,490.1	3,482.2	6.7	7.1	93.53	-183.0	-115.5	168.9	155.7	13.26	12.736	
3,600.0	3,590.5	3,589.6	3,581.4	6.9	7.4	96.07	-189.5	-119.3	175.4	161.6	13.76	12.749	
3,700.0	3,689.6	3,689.1	3,680.6	7.2	7.6	98.43	-196.1	-123.2	182.2	167.9	14.25	12.785	
3,800.0	3,788.7	3,788.6	3,779.8	7.4	7.8	100.61	-202.7	-127.0	189.2	174.5	14.74	12.840	
3,900.0	3,887.9	3,888.1	3,879.0	7.7	8.0	102.63	-209.2	-130.8	196.6	181.3	15.23	12.909	
4,000.0	3,987.0	3,987.6	3,978.2	7.9	8.2	104.51	-215.8	-134.7	204.1	188.4	15.71	12.991	
4,100.0	4,086.1	4,087.1	4,077.4	8.2	8.4	106.25	-222.4	-138.5	211.9	195.7	16.20	13.082	
4,200.0	4,185.3	4,186.6	4,176.6	8.5	8.7	107.87	-228.9	-142.4	219.8	203.1	16.68	13.181	
4,300.0	4,284.4	4,286.1	4,275.8	8.7	8.9	109.37	-235.5	-146.2	227.9	210.8	17.15	13.286	
4,400.0	4,383.5	4,385.6	4,375.0	9.0	9.1	110.77	-242.0	-150.0	236.2	218.5	17.63	13.396	
4,500.0	4,482.6	4,485.1	4,474.2	9.3	9.3	112.08	-248.6	-153.9	244.5	226.4	18.10	13.509	
4,600.0	4,581.8	4,584.6	4,573.5	9.6	9.5	113.30	-255.2	-157.7	253.0	234.5	18.57	13.624	
4,700.0	4,680.9	4,684.1	4,672.7	9.8	9.8	114.43	-261.7	-161.6	261.6	242.6	19.04	13.741	
4,800.0	4,780.0	4,783.6	4,771.9	10.1	10.0	115.50	-268.3	-165.4	270.3	250.8	19.51	13.859	
4,900.0	4,879.2	4,883.1	4,871.1	10.4	10.2	116.50	-274.9	-169.3	279.1	259.1	19.97	13.976	
5,000.0	4,978.3	4,982.6	4,970.3	10.7	10.4	117.44	-281.4	-173.1	288.0	267.5	20.43	14.094	
5,100.0	5,077.4	5,082.1	5,069.5	10.9	10.6	118.32	-288.0	-176.9	296.9	276.0	20.89	14.211	

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 Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,176.6	5,181.6	5,168.7	11.2	10.8	119.15	-294.6	-180.8	305.9	284.6	21.35	14.327	
5,300.0	5,275.7	5,281.1	5,267.9	11.5	11.1	119.94	-301.1	-184.6	315.0	293.2	21.81	14.442	
5,400.0	5,374.8	5,380.6	5,367.1	11.8	11.3	120.68	-307.7	-188.5	324.1	301.8	22.27	14.555	
5,500.0	5,474.0	5,480.0	5,466.3	12.0	11.5	121.37	-314.3	-192.3	333.2	310.5	22.72	14.667	
5,600.0	5,573.1	5,579.5	5,565.5	12.3	11.7	122.04	-320.8	-196.1	342.5	319.3	23.17	14.777	
5,700.0	5,672.2	5,679.0	5,664.7	12.6	11.9	122.66	-327.4	-200.0	351.7	328.1	23.63	14.886	
5,800.0	5,771.3	5,778.5	5,763.9	12.9	12.2	123.26	-334.0	-203.8	361.0	336.9	24.08	14.992	
5,900.0	5,870.5	5,878.0	5,863.2	13.1	12.4	123.82	-340.5	-207.7	370.3	345.8	24.53	15.097	
6,000.0	5,969.6	5,977.5	5,962.4	13.4	12.6	124.36	-347.1	-211.5	379.7	354.7	24.98	15.200	
6,100.0	6,068.7	6,077.0	6,061.6	13.7	12.8	124.87	-353.6	-215.3	389.1	363.7	25.43	15.300	
6,200.0	6,167.9	6,176.5	6,160.8	14.0	13.0	125.36	-360.2	-219.2	398.5	372.7	25.88	15.399	
6,300.0	6,267.0	6,276.0	6,260.0	14.3	13.2	125.82	-366.8	-223.0	408.0	381.7	26.33	15.496	
6,400.0	6,366.1	6,375.5	6,359.2	14.6	13.5	126.27	-373.3	-226.9	417.5	390.7	26.78	15.591	
6,500.0	6,465.3	6,475.0	6,458.4	14.8	13.7	126.69	-379.9	-230.7	427.0	399.8	27.22	15.684	
6,600.0	6,564.4	6,574.5	6,557.6	15.1	13.9	127.09	-386.5	-234.6	436.5	408.8	27.67	15.775	
6,700.0	6,663.5	6,674.0	6,656.8	15.4	14.1	127.48	-393.0	-238.4	446.1	417.9	28.12	15.864	
6,800.0	6,762.7	6,773.5	6,756.0	15.7	14.3	127.85	-399.6	-242.2	455.6	427.1	28.56	15.952	
6,900.0	6,861.8	6,873.0	6,855.2	16.0	14.6	128.21	-406.2	-246.1	465.2	436.2	29.01	16.037	
7,000.0	6,960.9	6,972.5	6,954.4	16.2	14.8	128.55	-412.7	-249.9	474.8	445.4	29.45	16.121	
7,100.0	7,060.0	7,057.2	7,038.9	16.5	14.9	129.06	-416.3	-253.2	485.4	455.6	29.82	16.278	
11,500.0	8,036.0	10,797.2	7,595.0	56.9	56.4	-27.12	3,010.1	-311.0	496.1	437.0	59.03	8.403	
11,600.0	8,036.0	10,896.7	7,595.0	58.6	58.1	-26.18	3,109.7	-312.1	491.8	432.5	59.25	8.299	
11,700.0	8,036.0	10,996.4	7,595.0	60.3	59.8	-25.40	3,209.4	-313.1	488.4	428.8	59.61	8.193	
11,800.0	8,036.0	11,096.2	7,595.0	62.0	61.5	-24.78	3,309.2	-314.1	485.8	425.7	60.15	8.078	
11,900.0	8,036.0	11,196.1	7,595.0	63.7	63.2	-24.34	3,409.1	-315.2	484.1	423.2	60.89	7.950	
12,000.0	8,036.0	11,296.1	7,595.0	65.4	64.9	-24.07	3,509.0	-316.2	483.0	421.2	61.87	7.807	
12,094.9	8,036.0	11,391.0	7,595.0	67.0	66.6	-23.99	3,603.9	-317.2	482.7	419.6	63.06	7.655	
12,100.0	8,036.0	11,396.1	7,595.0	67.1	66.7	-23.99	3,609.0	-317.3	482.7	419.6	63.13	7.646	
12,200.0	8,036.0	11,496.1	7,595.0	68.8	68.4	-24.09	3,709.0	-318.3	483.1	418.4	64.69	7.468	
12,300.0	8,036.0	11,596.0	7,595.0	70.5	70.1	-24.37	3,809.0	-319.4	484.2	417.6	66.58	7.272	
12,400.0	8,036.0	11,695.9	7,595.0	72.2	71.8	-24.84	3,908.9	-320.4	486.1	417.2	68.82	7.063	
12,500.0	8,036.0	11,795.8	7,595.0	74.0	73.5	-25.46	4,008.7	-321.5	488.6	417.2	71.44	6.839	
12,600.0	8,036.0	11,895.6	7,595.0	75.7	75.2	-26.12	4,108.5	-322.5	491.4	417.1	74.23	6.619	
12,700.0	8,036.0	11,995.4	7,595.0	77.4	77.0	-26.78	4,208.3	-323.6	494.2	417.1	77.08	6.411	
12,800.0	8,036.0	12,095.2	7,595.0	79.1	78.7	-27.42	4,308.1	-324.6	497.0	417.0	79.98	6.214	
12,900.0	8,036.0	12,195.0	7,595.0	80.8	80.4	-28.06	4,407.9	-325.7	500.0	417.0	82.94	6.028	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	11.2	11.2				
100.0	100.0	100.0	100.0	0.2	0.2	90.04	0.0	11.2	11.2	10.9	0.30	36.891	
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	11.2	11.2	10.6	0.65	17.163	
300.0	300.0	300.0	300.0	0.5	0.5	90.04	0.0	11.2	11.2	10.2	1.00	11.183	
400.0	400.0	400.0	400.0	0.7	0.7	90.04	0.0	11.2	11.2	9.9	1.35	8.293	
500.0	500.0	500.0	500.0	0.8	0.8	90.04	0.0	11.2	11.2	9.5	1.70	6.590	CC, ES
600.0	600.0	599.9	599.9	1.0	1.0	93.64	-0.7	11.7	11.7	9.6	2.05	5.708	
700.0	700.0	699.7	699.7	1.2	1.2	102.68	-2.9	13.1	13.4	11.0	2.40	5.591	SF
800.0	800.0	799.4	799.3	1.4	1.4	113.18	-6.6	15.4	16.8	14.0	2.75	6.110	
900.0	900.0	898.9	898.6	1.5	1.6	122.08	-11.7	18.7	22.1	19.0	3.09	7.137	
1,000.0	1,000.0	998.2	997.6	1.7	1.8	128.61	-18.3	22.9	29.3	25.9	3.44	8.527	
1,100.0	1,100.0	1,097.2	1,096.1	1.9	2.0	133.17	-26.2	27.9	38.5	34.7	3.79	10.161	
1,200.0	1,200.0	1,195.8	1,194.1	2.1	2.2	136.36	-35.6	33.9	49.5	45.4	4.14	11.960	
1,300.0	1,300.0	1,294.9	1,292.4	2.2	2.5	138.56	-45.9	40.5	61.7	57.2	4.49	13.746	
1,400.0	1,400.0	1,394.1	1,390.9	2.4	2.7	140.05	-56.3	47.2	74.0	69.2	4.84	15.285	
1,500.0	1,500.0	1,493.3	1,489.3	2.6	3.0	141.11	-66.7	53.8	86.4	81.2	5.20	16.619	
1,600.0	1,600.0	1,592.6	1,587.8	2.8	3.2	141.90	-77.1	60.5	98.7	93.2	5.55	17.783	
1,700.0	1,700.0	1,691.8	1,686.2	2.9	3.5	142.52	-87.5	67.1	111.1	105.2	5.91	18.808	
1,800.0	1,800.0	1,791.0	1,784.7	3.1	3.8	143.01	-97.9	73.7	123.5	117.3	6.27	19.716	
1,900.0	1,900.0	1,890.2	1,883.1	3.3	4.0	143.41	-108.3	80.4	135.9	129.3	6.62	20.526	
2,000.0	2,000.0	1,989.5	1,981.6	3.5	4.3	143.75	-118.7	87.0	148.3	141.3	6.98	21.253	
2,100.0	2,100.0	2,088.8	2,080.1	3.6	4.6	-17.22	-129.1	93.7	159.9	152.6	7.27	22.002	
2,200.0	2,200.0	2,188.3	2,178.9	3.8	4.8	-17.20	-139.5	100.3	169.8	162.2	7.62	22.296	
2,300.0	2,299.9	2,287.9	2,277.8	4.0	5.1	-17.35	-150.0	107.0	178.1	170.1	7.97	22.355	
2,400.0	2,399.7	2,387.7	2,376.8	4.2	5.4	-17.65	-160.4	113.7	184.7	176.4	8.32	22.210	
2,500.0	2,499.4	2,487.6	2,475.9	4.4	5.7	-18.10	-170.9	120.4	189.7	181.0	8.67	21.885	
2,600.0	2,598.9	2,587.5	2,575.0	4.6	5.9	-18.70	-181.4	127.1	193.0	184.0	9.02	21.400	
2,700.0	2,698.3	2,687.5	2,674.2	4.8	6.2	-19.44	-191.8	133.8	194.7	185.3	9.37	20.774	
2,800.0	2,797.4	2,787.4	2,773.4	5.0	6.5	-20.34	-202.3	140.4	194.9	185.2	9.73	20.030	
2,900.0	2,896.6	2,887.4	2,872.5	5.2	6.8	-21.27	-212.8	147.1	195.0	184.9	10.10	19.304	
3,000.0	2,995.7	2,987.3	2,971.7	5.4	7.0	-22.19	-223.2	153.8	195.0	184.6	10.47	18.627	
3,100.0	3,094.8	3,087.3	3,070.9	5.7	7.3	-23.12	-233.7	160.5	195.2	184.3	10.85	17.993	
3,200.0	3,193.9	3,187.2	3,170.1	5.9	7.6	-24.04	-244.2	167.2	195.4	184.1	11.23	17.399	
3,300.0	3,293.1	3,287.2	3,269.2	6.2	7.9	-24.96	-254.7	173.9	195.6	184.0	11.62	16.841	
3,400.0	3,392.2	3,387.1	3,368.4	6.4	8.1	-25.88	-265.1	180.6	195.9	183.9	12.01	16.315	
3,500.0	3,491.3	3,487.1	3,467.6	6.7	8.4	-26.79	-275.6	187.3	196.2	183.8	12.41	15.820	
3,600.0	3,590.5	3,587.0	3,566.8	6.9	8.7	-27.71	-286.1	194.0	196.6	183.8	12.81	15.353	
3,700.0	3,689.6	3,687.0	3,665.9	7.2	9.0	-28.61	-296.5	200.7	197.1	183.9	13.22	14.911	
3,800.0	3,788.7	3,786.9	3,765.1	7.4	9.2	-29.52	-307.0	207.3	197.6	183.9	13.63	14.493	
3,900.0	3,887.9	3,886.9	3,864.3	7.7	9.5	-30.42	-317.5	214.0	198.1	184.1	14.05	14.096	
4,000.0	3,987.0	3,986.8	3,963.5	7.9	9.8	-31.31	-328.0	220.7	198.7	184.2	14.48	13.720	
4,100.0	4,086.1	4,086.8	4,062.6	8.2	10.1	-32.20	-338.4	227.4	199.3	184.4	14.92	13.363	
4,200.0	4,185.3	4,186.7	4,161.8	8.5	10.3	-33.08	-348.9	234.1	200.0	184.7	15.36	13.024	
4,300.0	4,284.4	4,286.7	4,261.0	8.7	10.6	-33.96	-359.4	240.8	200.8	184.9	15.81	12.701	
4,400.0	4,383.5	4,386.6	4,360.2	9.0	10.9	-34.83	-369.8	247.5	201.5	185.3	16.26	12.394	
4,500.0	4,482.6	4,486.6	4,459.3	9.3	11.2	-35.69	-380.3	254.2	202.4	185.6	16.72	12.102	
4,600.0	4,581.8	4,586.5	4,558.5	9.6	11.5	-36.55	-390.8	260.9	203.2	186.0	17.19	11.823	
4,700.0	4,680.9	4,686.5	4,657.7	9.8	11.7	-37.39	-401.3	267.6	204.1	186.5	17.66	11.558	
4,800.0	4,780.0	4,786.4	4,756.9	10.1	12.0	-38.24	-411.7	274.2	205.1	187.0	18.14	11.305	
4,900.0	4,879.2	4,886.4	4,856.0	10.4	12.3	-39.07	-422.2	280.9	206.1	187.5	18.63	11.063	
5,000.0	4,978.3	4,986.3	4,955.2	10.7	12.6	-39.89	-432.7	287.6	207.1	188.0	19.12	10.833	
5,100.0	5,077.4	5,086.3	5,054.4	10.9	12.8	-40.71	-443.1	294.3	208.2	188.6	19.62	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 Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,176.6	5,186.2	5,153.6	11.2	13.1	-41.52	-453.6	301.0	209.4	189.2	20.12	10.403	
5,300.0	5,275.7	5,286.2	5,252.7	11.5	13.4	-42.31	-464.1	307.7	210.5	189.9	20.63	10.203	
5,400.0	5,374.8	5,386.1	5,351.9	11.8	13.7	-43.10	-474.6	314.4	211.7	190.6	21.15	10.011	
5,500.0	5,474.0	5,486.1	5,451.1	12.0	14.0	-43.88	-485.0	321.1	213.0	191.3	21.67	9.828	
5,600.0	5,573.1	5,586.0	5,550.3	12.3	14.2	-44.65	-495.5	327.8	214.3	192.1	22.20	9.653	
5,700.0	5,672.2	5,686.0	5,649.4	12.6	14.5	-45.42	-506.0	334.5	215.6	192.9	22.73	9.486	
5,800.0	5,771.3	5,785.9	5,748.6	12.9	14.8	-46.17	-516.5	341.1	217.0	193.7	23.27	9.326	
5,900.0	5,870.5	5,885.9	5,847.8	13.1	15.1	-46.91	-526.9	347.8	218.4	194.6	23.81	9.173	
6,000.0	5,969.6	5,985.8	5,947.0	13.4	15.3	-47.64	-537.4	354.5	219.8	195.5	24.35	9.027	
6,100.0	6,068.7	6,085.8	6,046.1	13.7	15.6	-48.37	-547.9	361.2	221.3	196.4	24.90	8.887	
6,200.0	6,167.9	6,185.7	6,145.3	14.0	15.9	-49.08	-558.3	367.9	222.8	197.4	25.46	8.753	
6,300.0	6,267.0	6,285.7	6,244.5	14.3	16.2	-49.79	-568.8	374.6	224.4	198.3	26.01	8.625	
6,400.0	6,366.1	6,385.6	6,343.6	14.6	16.5	-50.48	-579.3	381.3	225.9	199.4	26.57	8.502	
6,500.0	6,465.3	6,485.6	6,442.8	14.8	16.7	-51.16	-589.8	388.0	227.5	200.4	27.14	8.384	
6,600.0	6,564.4	6,585.5	6,542.0	15.1	17.0	-51.84	-600.2	394.7	229.2	201.5	27.71	8.272	
6,700.0	6,663.5	6,685.5	6,641.2	15.4	17.3	-52.50	-610.7	401.4	230.9	202.6	28.28	8.164	
6,800.0	6,762.7	6,785.4	6,740.3	15.7	17.6	-53.16	-621.2	408.1	232.6	203.7	28.85	8.060	
6,900.0	6,861.8	6,885.4	6,839.5	16.0	17.8	-53.81	-631.6	414.7	234.3	204.9	29.43	7.961	
7,000.0	6,960.9	6,985.3	6,938.7	16.2	18.1	-54.44	-642.1	421.4	236.1	206.1	30.01	7.866	
7,100.0	7,060.0	7,096.1	7,049.0	16.5	18.3	-56.68	-647.0	428.6	236.1	205.3	30.78	7.669	
7,200.0	7,159.2	7,203.1	7,154.6	16.8	18.3	-63.50	-632.0	434.6	232.3	200.2	32.05	7.246	
7,273.3	7,231.9	7,273.5	7,221.8	17.0	18.1	-70.61	-611.5	437.9	230.5	197.5	33.07	6.971	
7,300.0	7,258.3	7,297.1	7,243.7	17.1	18.1	-73.44	-602.8	438.9	230.9	197.5	33.41	6.909	
7,400.0	7,357.4	7,376.2	7,314.3	17.4	17.8	-84.18	-567.2	441.8	240.1	205.7	34.38	6.981	
7,500.0	7,456.9	7,443.5	7,369.9	17.6	17.5	-39.50	-529.5	443.6	264.2	229.4	34.80	7.593	
7,600.0	7,556.4	7,507.4	7,418.4	17.6	17.3	40.66	-487.9	444.8	297.0	262.7	34.31	8.658	
7,700.0	7,653.1	7,569.4	7,460.7	17.5	17.0	39.86	-442.7	445.5	332.8	299.8	33.01	10.083	
7,800.0	7,744.0	7,629.9	7,497.1	17.1	16.7	35.91	-394.3	445.7	368.1	336.9	31.12	11.827	
7,900.0	7,826.4	7,689.4	7,527.7	16.7	16.4	32.28	-343.4	445.4	400.4	371.6	28.84	13.882	
8,000.0	7,897.7	7,750.0	7,553.3	16.3	16.2	29.31	-288.5	444.6	428.4	402.1	26.38	16.243	
8,100.0	7,955.9	7,800.0	7,570.0	15.8	16.0	27.28	-241.3	443.6	451.3	427.2	24.03	18.776	
8,200.0	7,999.1	7,863.8	7,585.2	15.5	15.9	25.57	-179.5	441.9	468.0	446.0	21.99	21.280	
8,300.0	8,026.1	7,921.1	7,592.9	15.3	15.8	24.50	-122.7	439.9	478.5	457.8	20.69	23.133	
8,400.0	8,035.9	7,984.4	7,595.0	15.3	15.8	23.88	-59.5	437.2	482.3	461.9	20.37	23.683	
8,500.0	8,036.0	8,084.3	7,595.0	15.4	15.9	23.41	40.3	432.9	480.6	459.8	20.79	23.119	
8,600.0	8,036.0	8,184.2	7,595.0	15.8	16.3	23.03	140.1	428.5	479.2	457.9	21.30	22.494	
8,700.0	8,036.0	8,284.2	7,595.0	16.3	16.8	22.83	240.0	424.2	478.4	456.5	21.92	21.830	
8,756.5	8,036.0	8,340.8	7,595.0	16.7	17.1	22.80	296.5	421.7	478.3	456.0	22.31	21.439	
8,800.0	8,036.0	8,384.2	7,595.0	17.0	17.5	22.82	339.9	419.8	478.4	455.8	22.62	21.145	
8,900.0	8,036.0	8,484.2	7,595.0	17.9	18.3	22.99	439.8	415.4	479.0	455.6	23.43	20.448	
9,000.0	8,036.0	8,584.2	7,595.0	18.8	19.2	23.35	539.6	411.1	480.4	456.0	24.33	19.744	
9,100.0	8,036.0	8,684.0	7,595.0	19.9	20.3	23.89	639.4	406.7	482.4	457.1	25.34	19.036	
9,200.0	8,036.0	8,783.8	7,595.0	21.0	21.4	24.60	739.1	402.4	485.2	458.7	26.49	18.317	
9,300.0	8,036.0	8,883.5	7,595.0	22.2	22.6	25.35	838.7	398.0	488.2	460.4	27.76	17.587	
9,400.0	8,036.0	8,983.3	7,595.0	23.5	23.9	26.10	938.4	393.7	491.3	462.2	29.13	16.866	
9,500.0	8,036.0	9,083.0	7,595.0	24.9	25.2	26.84	1,038.1	389.3	494.5	463.9	30.60	16.162	
9,600.0	8,036.0	9,182.8	7,595.0	26.3	26.6	27.57	1,137.7	385.0	497.7	465.6	32.16	15.478	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	19.6	19.6				
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	19.6	19.6	19.3	0.30	64.560	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.65	30.036	
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	19.6	19.6	18.6	1.00	19.570	
400.0	400.0	400.0	400.0	0.7	0.7	90.05	0.0	19.6	19.6	18.3	1.35	14.513	CC, ES
500.0	500.0	499.7	499.7	0.8	0.9	91.60	-0.6	20.3	20.3	18.6	1.70	11.937	
600.0	600.0	599.4	599.4	1.0	1.0	95.67	-2.2	22.3	22.4	20.4	2.05	10.941	
700.0	700.0	698.9	698.8	1.2	1.2	100.94	-5.0	25.6	26.1	23.7	2.40	10.908	SF
800.0	800.0	798.3	798.0	1.4	1.4	106.15	-8.8	30.3	31.6	28.9	2.74	11.524	
900.0	900.0	897.4	896.8	1.5	1.6	110.65	-13.7	36.3	38.9	35.8	3.09	12.592	
1,000.0	1,000.0	996.3	995.2	1.7	1.8	114.26	-19.6	43.6	48.1	44.6	3.44	13.974	
1,100.0	1,100.0	1,094.7	1,093.0	1.9	2.1	117.07	-26.7	52.2	59.0	55.2	3.79	15.576	
1,200.0	1,200.0	1,192.8	1,190.3	2.1	2.3	119.24	-34.7	62.0	71.7	67.6	4.14	17.332	
1,300.0	1,300.0	1,290.8	1,287.2	2.2	2.6	120.92	-43.7	73.0	86.1	81.6	4.49	19.177	
1,400.0	1,400.0	1,389.7	1,385.0	2.4	2.9	122.16	-53.1	84.5	100.9	96.1	4.84	20.837	
1,500.0	1,500.0	1,488.6	1,482.7	2.6	3.2	123.08	-62.5	96.0	115.8	110.6	5.20	22.270	
1,600.0	1,600.0	1,587.4	1,580.5	2.8	3.5	123.79	-71.9	107.4	130.7	125.2	5.56	23.519	
1,700.0	1,700.0	1,686.3	1,678.3	2.9	3.8	124.36	-81.3	118.9	145.6	139.7	5.92	24.615	
1,800.0	1,800.0	1,785.2	1,776.0	3.1	4.1	124.82	-90.7	130.4	160.6	154.3	6.28	25.584	
1,900.0	1,900.0	1,884.0	1,873.8	3.3	4.4	125.20	-100.0	141.8	175.5	168.9	6.64	26.447	
2,000.0	2,000.0	1,982.9	1,971.5	3.5	4.7	125.52	-109.4	153.3	190.5	183.5	7.00	27.219	
2,100.0	2,100.0	2,081.9	2,069.4	3.6	5.0	-35.46	-118.8	164.8	204.7	197.5	7.26	28.212	
2,200.0	2,200.0	2,181.1	2,167.4	3.8	5.3	-35.54	-128.2	176.3	217.6	210.0	7.61	28.601	
2,300.0	2,299.9	2,280.4	2,265.6	4.0	5.6	-35.87	-137.7	187.8	229.0	221.1	7.96	28.774	
2,400.0	2,399.7	2,379.8	2,364.0	4.2	5.9	-36.41	-147.1	199.3	239.1	230.7	8.31	28.755	
2,500.0	2,499.4	2,479.4	2,462.4	4.4	6.2	-37.16	-156.5	210.9	247.8	239.1	8.67	28.567	
2,600.0	2,598.9	2,579.0	2,560.9	4.6	6.5	-38.10	-166.0	222.4	255.1	246.1	9.04	28.225	
2,700.0	2,698.3	2,678.7	2,659.5	4.8	6.8	-39.23	-175.5	234.0	261.2	251.8	9.41	27.746	
2,800.0	2,797.4	2,778.4	2,758.0	5.0	7.1	-40.55	-184.9	245.5	266.2	256.4	9.80	27.153	
2,900.0	2,896.6	2,878.1	2,856.6	5.2	7.4	-41.87	-194.4	257.1	271.1	260.9	10.20	26.568	
3,000.0	2,995.7	2,977.8	2,955.2	5.4	7.8	-43.15	-203.8	268.6	276.2	265.6	10.62	26.016	
3,100.0	3,094.8	3,077.5	3,053.7	5.7	8.1	-44.38	-213.3	280.2	281.4	270.4	11.04	25.495	
3,200.0	3,193.9	3,177.1	3,152.3	5.9	8.4	-45.56	-222.8	291.8	286.7	275.2	11.47	25.003	
3,300.0	3,293.1	3,276.8	3,250.8	6.2	8.7	-46.70	-232.2	303.3	292.2	280.2	11.91	24.537	
3,400.0	3,392.2	3,376.5	3,349.4	6.4	9.0	-47.80	-241.7	314.9	297.7	285.4	12.35	24.097	
3,500.0	3,491.3	3,476.2	3,448.0	6.7	9.3	-48.86	-251.1	326.4	303.4	290.6	12.81	23.680	
3,600.0	3,590.5	3,575.9	3,546.5	6.9	9.6	-49.88	-260.6	338.0	309.1	295.9	13.28	23.285	
3,700.0	3,689.6	3,675.6	3,645.1	7.2	9.9	-50.86	-270.1	349.6	315.0	301.2	13.75	22.910	
3,800.0	3,788.7	3,775.3	3,743.6	7.4	10.3	-51.81	-279.5	361.1	320.9	306.7	14.23	22.556	
3,900.0	3,887.9	3,874.9	3,842.2	7.7	10.6	-52.72	-289.0	372.7	327.0	312.2	14.71	22.220	
4,000.0	3,987.0	3,974.6	3,940.8	7.9	10.9	-53.60	-298.4	384.2	333.1	317.9	15.21	21.901	
4,100.0	4,086.1	4,074.3	4,039.3	8.2	11.2	-54.44	-307.9	395.8	339.2	323.5	15.71	21.599	
4,200.0	4,185.3	4,174.0	4,137.9	8.5	11.5	-55.26	-317.4	407.4	345.5	329.3	16.21	21.313	
4,300.0	4,284.4	4,273.7	4,236.4	8.7	11.8	-56.05	-326.8	418.9	351.8	335.1	16.72	21.041	
4,400.0	4,383.5	4,373.4	4,335.0	9.0	12.1	-56.81	-336.3	430.5	358.2	341.0	17.23	20.784	
4,500.0	4,482.6	4,473.0	4,433.5	9.3	12.4	-57.54	-345.7	442.0	364.6	346.9	17.75	20.539	
4,600.0	4,581.8	4,572.7	4,532.1	9.6	12.8	-58.25	-355.2	453.6	371.1	352.9	18.28	20.307	
4,700.0	4,680.9	4,672.4	4,630.7	9.8	13.1	-58.93	-364.7	465.2	377.7	358.9	18.80	20.086	
4,800.0	4,780.0	4,772.1	4,729.2	10.1	13.4	-59.59	-374.1	476.7	384.3	365.0	19.34	19.877	
4,900.0	4,879.2	4,871.8	4,827.8	10.4	13.7	-60.23	-383.6	488.3	391.0	371.1	19.87	19.677	
5,000.0	4,978.3	4,971.5	4,926.3	10.7	14.0	-60.84	-393.0	499.8	397.7	377.3	20.41	19.488	
5,100.0	5,077.4	5,071.2	5,024.9	10.9	14.3	-61.44	-402.5	511.4	404.4	383.5	20.95	19.307	

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 Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,176.6	5,170.8	5,123.5	11.2	14.6	-62.01	-412.0	522.9	411.2	389.7	21.49	19.135	
5,300.0	5,275.7	5,270.5	5,222.0	11.5	15.0	-62.57	-421.4	534.5	418.1	396.0	22.04	18.971	
5,400.0	5,374.8	5,370.2	5,320.6	11.8	15.3	-63.11	-430.9	546.1	424.9	402.3	22.58	18.815	
5,500.0	5,474.0	5,469.9	5,419.1	12.0	15.6	-63.63	-440.3	557.6	431.8	408.7	23.13	18.666	
5,600.0	5,573.1	5,569.6	5,517.7	12.3	15.9	-64.14	-449.8	569.2	438.8	415.1	23.69	18.524	
5,700.0	5,672.2	5,669.3	5,616.3	12.6	16.2	-64.63	-459.3	580.7	445.7	421.5	24.24	18.389	
5,800.0	5,771.3	5,769.0	5,714.8	12.9	16.5	-65.10	-468.7	592.3	452.7	427.9	24.80	18.259	
5,900.0	5,870.5	5,868.6	5,813.4	13.1	16.8	-65.56	-478.2	603.9	459.8	434.4	25.35	18.135	
6,000.0	5,969.6	5,968.3	5,911.9	13.4	17.2	-66.01	-487.6	615.4	466.8	440.9	25.91	18.017	
6,100.0	6,068.7	6,068.0	6,010.5	13.7	17.5	-66.44	-497.1	627.0	473.9	447.5	26.47	17.903	
6,200.0	6,167.9	6,167.7	6,109.1	14.0	17.8	-66.86	-506.6	638.5	481.1	454.0	27.03	17.795	
6,300.0	6,267.0	6,267.4	6,207.6	14.3	18.1	-67.27	-516.0	650.1	488.2	460.6	27.60	17.691	
6,400.0	6,366.1	6,367.1	6,306.2	14.6	18.4	-67.66	-525.5	661.7	495.4	467.2	28.16	17.591	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 218-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	4.2	4.2	0.0	0.0	-1.63	328.3	-9.4	328.5				
100.0	100.0	108.1	108.1	0.2	0.2	-1.54	327.7	-8.8	327.8	327.5	0.34	978.097	
200.0	200.0	211.9	211.9	0.3	0.4	-1.29	325.8	-7.3	326.0	325.3	0.69	475.238	
300.0	300.0	316.6	316.5	0.5	0.6	-1.34	322.5	-7.6	322.8	321.8	1.04	311.636	
400.0	400.0	419.0	418.6	0.7	0.8	-2.43	317.9	-13.5	318.5	317.1	1.39	229.331	
500.0	500.0	518.7	517.5	0.8	1.0	-4.46	312.7	-24.4	313.9	312.2	1.78	176.769	
600.0	600.0	614.2	611.8	1.0	1.3	-7.25	307.9	-39.2	310.4	308.2	2.22	139.967	
691.9	691.9	700.0	695.9	1.2	1.6	-10.37	304.2	-55.7	309.2	306.5	2.68	115.203	CC
700.0	700.0	707.4	703.2	1.2	1.6	-10.66	303.9	-57.2	309.2	306.5	2.73	113.310	ES
800.0	800.0	797.2	790.6	1.4	2.0	-14.41	301.2	-77.4	311.3	308.0	3.30	94.445	
900.0	900.0	882.8	873.5	1.5	2.4	-18.12	301.2	-98.6	318.4	314.5	3.89	81.947	
1,000.0	1,000.0	977.8	965.4	1.7	2.8	-22.05	302.9	-122.7	329.1	324.6	4.52	72.798	
1,100.0	1,100.0	1,072.1	1,056.6	1.9	3.2	-25.63	305.2	-146.4	341.8	336.7	5.14	66.450	
1,200.0	1,200.0	1,162.9	1,144.2	2.1	3.7	-28.92	308.2	-170.3	357.1	351.4	5.76	62.013	
1,300.0	1,300.0	1,251.7	1,229.5	2.2	4.1	-31.94	312.2	-194.6	375.4	369.0	6.36	59.060	
1,400.0	1,400.0	1,334.5	1,308.6	2.4	4.6	-34.49	317.9	-218.4	397.3	390.4	6.92	57.457	
1,500.0	1,500.0	1,430.2	1,399.8	2.6	5.1	-37.05	326.1	-246.2	421.7	414.2	7.50	56.213	
1,600.0	1,600.0	1,524.3	1,489.5	2.8	5.6	-39.28	334.4	-273.4	446.9	438.8	8.06	55.416	
1,700.0	1,700.0	1,620.5	1,581.1	2.9	6.2	-41.33	342.8	-301.5	472.7	464.1	8.62	54.866	
1,800.0	1,800.0	1,726.3	1,682.2	3.1	6.7	-43.38	350.9	-331.6	497.9	488.7	9.18	54.225	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 216-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,100.0	8,036.0	8,184.0	8,068.8	33.8	21.6	-89.31	2,053.6	-139.8	490.3	435.9	54.38	9.016	
10,200.0	8,036.0	8,185.5	8,070.3	35.4	21.6	-89.80	2,053.6	-139.8	399.6	343.6	55.98	7.138	
10,300.0	8,036.0	8,187.1	8,071.9	37.0	21.6	-90.28	2,053.6	-139.7	314.6	257.0	57.59	5.463	
10,400.0	8,036.0	8,188.7	8,073.5	38.6	21.6	-90.75	2,053.7	-139.7	241.4	182.1	59.21	4.076	
10,500.0	8,036.0	8,190.2	8,075.0	40.2	21.6	-91.23	2,053.7	-139.6	193.7	132.9	60.84	3.184	
10,555.2	8,036.0	8,191.1	8,075.8	41.1	21.7	-91.49	2,053.7	-139.6	185.9	124.3	61.67	3.015	CC, ES, SF
10,600.0	8,036.0	8,191.7	8,076.5	41.8	21.7	-91.70	2,053.7	-139.6	191.2	128.8	62.34	3.067	
10,700.0	8,036.0	8,193.2	8,078.0	43.5	21.7	-92.15	2,053.8	-139.6	234.5	170.6	63.90	3.670	
10,800.0	8,036.0	8,194.7	8,079.5	45.1	21.7	-92.60	2,053.8	-139.5	305.5	239.9	65.54	4.661	
10,900.0	8,036.0	8,196.1	8,080.9	46.8	21.7	-93.04	2,053.8	-139.5	389.4	322.2	67.19	5.796	
11,000.0	8,036.0	8,197.6	8,082.4	48.5	21.7	-93.49	2,053.8	-139.5	479.6	410.7	68.85	6.966	

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 Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 1020-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	3.0	3.0	0.0	0.0	16.49	280.1	82.9	292.1				
100.0	100.0	103.0	103.0	0.2	0.2	16.51	280.1	83.0	292.1	291.8	0.33	878.875	
200.0	200.0	203.1	203.1	0.3	0.4	16.57	280.0	83.3	292.1	291.4	0.68	428.189	
300.0	300.0	303.1	303.1	0.5	0.5	16.66	279.8	83.7	292.1	291.1	1.03	283.026	
400.0	400.0	403.1	403.1	0.7	0.7	16.79	279.6	84.4	292.1	290.7	1.38	211.354	
500.0	500.0	503.1	503.1	0.8	0.9	16.96	279.3	85.2	292.0	290.3	1.73	168.636	
600.0	600.0	603.2	603.2	1.0	1.1	17.16	279.0	86.2	292.0	289.9	2.08	140.274	
700.0	700.0	703.2	703.2	1.2	1.2	17.40	278.5	87.3	291.9	289.5	2.43	120.072	
800.0	800.0	803.2	803.2	1.4	1.4	17.68	278.1	88.6	291.8	289.1	2.78	104.953	
900.0	900.0	903.2	903.2	1.5	1.6	18.00	277.5	90.2	291.8	288.7	3.13	93.212	
1,000.0	1,000.0	1,003.2	1,003.1	1.7	1.8	18.35	276.9	91.8	291.7	288.3	3.48	83.833	
1,100.0	1,100.0	1,111.3	1,111.2	1.9	2.0	18.69	275.1	93.1	290.5	286.7	3.85	75.533	
1,200.0	1,200.0	1,225.4	1,225.1	2.1	2.2	18.75	269.4	91.4	285.4	281.2	4.22	67.548	
1,300.0	1,300.0	1,339.8	1,338.8	2.2	2.4	18.99	257.4	88.6	274.6	269.9	4.62	59.446	
1,400.0	1,400.0	1,447.9	1,445.7	2.4	2.7	19.48	241.7	85.5	259.9	254.9	5.01	51.898	
1,500.0	1,500.0	1,555.6	1,551.6	2.6	3.0	19.92	222.5	80.6	241.6	236.2	5.41	44.683	
1,600.0	1,600.0	1,658.6	1,652.2	2.8	3.3	20.66	200.9	75.7	220.2	214.4	5.82	37.868	
1,700.0	1,700.0	1,760.4	1,751.2	2.9	3.7	21.40	177.7	69.6	196.9	190.6	6.22	31.654	
1,800.0	1,800.0	1,859.6	1,847.2	3.1	4.1	22.24	153.6	62.8	171.7	165.1	6.64	25.857	
1,900.0	1,900.0	1,954.0	1,938.4	3.3	4.5	23.93	130.2	57.8	146.7	139.7	7.08	20.724	
2,000.0	2,000.0	2,052.3	2,033.5	3.5	4.9	26.65	105.8	53.1	122.2	114.6	7.58	16.127	
2,100.0	2,100.0	2,149.2	2,127.1	3.6	5.3	-130.67	80.8	48.8	97.9	90.3	7.65	12.800	
2,200.0	2,200.0	2,245.7	2,220.2	3.8	5.7	-125.19	56.1	44.9	75.8	67.6	8.20	9.245	
2,300.0	2,299.9	2,343.2	2,314.6	4.0	6.2	-117.76	32.0	40.5	56.0	47.1	8.87	6.314	
2,400.0	2,399.7	2,441.0	2,409.4	4.2	6.6	-106.14	8.4	36.2	39.0	29.2	9.79	3.984	
2,500.0	2,499.4	2,539.5	2,504.8	4.4	7.0	-82.92	-15.8	31.7	25.3	14.1	11.14	2.269	
2,588.3	2,587.2	2,626.3	2,588.8	4.5	7.4	-44.32	-37.6	27.7	20.1	8.4	11.70	1.721	CC, ES, SF
2,600.0	2,598.9	2,637.9	2,600.0	4.6	7.5	-38.57	-40.5	27.1	20.2	8.6	11.60	1.743	
2,700.0	2,698.3	2,736.8	2,695.7	4.8	7.9	0.44	-64.7	21.8	26.1	15.9	10.23	2.555	
2,800.0	2,797.4	2,835.8	2,791.8	5.0	8.4	20.58	-88.0	16.5	36.4	26.5	9.87	3.689	
2,900.0	2,896.6	2,934.2	2,887.2	5.2	8.8	30.40	-111.7	11.9	49.3	39.1	10.19	4.835	
3,000.0	2,995.7	3,032.1	2,981.8	5.4	9.3	36.97	-136.3	6.0	64.5	53.8	10.70	6.027	
3,100.0	3,094.8	3,130.9	3,077.0	5.7	9.8	40.84	-161.8	0.0	80.8	69.5	11.23	7.191	
3,200.0	3,193.9	3,230.0	3,172.8	5.9	10.2	43.41	-186.7	-5.7	96.5	84.8	11.76	8.209	
3,300.0	3,293.1	3,328.8	3,268.3	6.2	10.7	45.96	-210.8	-12.5	112.4	100.0	12.32	9.118	
3,400.0	3,392.2	3,425.9	3,362.1	6.4	11.1	47.62	-234.9	-18.9	128.6	115.7	12.86	9.997	
3,500.0	3,491.3	3,523.8	3,456.3	6.7	11.6	48.38	-261.0	-24.8	146.2	132.8	13.36	10.946	
3,600.0	3,590.5	3,625.0	3,553.9	6.9	12.1	49.09	-287.2	-30.8	163.1	149.2	13.87	11.764	
3,700.0	3,689.6	3,725.7	3,651.4	7.2	12.6	49.63	-311.9	-35.8	178.4	164.0	14.36	12.417	
3,800.0	3,788.7	3,822.7	3,745.3	7.4	13.0	50.27	-335.4	-41.1	193.6	178.7	14.87	13.018	
3,900.0	3,887.9	3,919.7	3,839.1	7.7	13.5	50.93	-359.4	-47.3	209.8	194.4	15.38	13.640	
4,000.0	3,987.0	4,017.3	3,933.4	7.9	14.0	51.52	-384.0	-53.9	226.6	210.8	15.90	14.256	
4,100.0	4,086.1	4,118.0	4,030.5	8.2	14.4	51.93	-409.4	-60.3	243.3	226.9	16.41	14.822	
4,200.0	4,185.3	4,219.0	4,128.3	8.5	14.9	52.21	-434.6	-65.9	259.2	242.3	16.92	15.318	
4,300.0	4,284.4	4,327.4	4,233.8	8.7	15.4	52.66	-459.0	-71.2	272.8	255.3	17.46	15.627	
4,400.0	4,383.5	4,435.2	4,339.5	9.0	15.7	53.50	-479.1	-76.2	283.0	264.9	18.04	15.686	
4,500.0	4,482.6	4,541.3	4,444.1	9.3	16.1	54.43	-496.4	-80.4	290.8	272.2	18.63	15.607	
4,600.0	4,581.8	4,647.1	4,548.8	9.6	16.4	55.47	-511.2	-83.7	296.5	277.2	19.25	15.404	
4,700.0	4,680.9	4,756.2	4,657.1	9.8	16.7	56.76	-523.6	-86.6	299.8	279.9	19.90	15.069	
4,800.0	4,780.0	4,865.0	4,765.5	10.1	16.9	58.25	-532.5	-88.3	300.1	279.5	20.59	14.578	
4,900.0	4,879.2	4,965.1	4,865.4	10.4	17.1	59.72	-539.3	-89.2	299.0	277.8	21.26	14.068	
5,000.0	4,978.3	5,064.7	4,964.8	10.7	17.2	61.31	-545.5	-90.6	298.1	276.2	21.94	13.586	

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 Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Survey Program: 1020-MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,077.4	5,168.5	5,068.5	10.9	17.4	63.25	-550.8	-92.8	297.2	274.5	22.69	13.098	
5,200.0	5,176.6	5,277.5	5,177.4	11.2	17.5	65.57	-552.9	-93.5	293.2	269.7	23.49	12.480	
5,300.0	5,275.7	5,376.8	5,276.8	11.5	17.6	67.84	-553.7	-93.6	288.7	264.4	24.27	11.893	
5,400.0	5,374.8	5,475.6	5,375.6	11.8	17.7	70.22	-554.3	-94.0	284.6	259.6	25.06	11.359	
5,500.0	5,474.0	5,574.0	5,474.0	12.0	17.8	72.72	-554.8	-94.8	281.3	255.5	25.85	10.885	
5,600.0	5,573.1	5,672.7	5,572.6	12.3	17.9	75.33	-555.3	-95.9	278.9	252.2	26.64	10.467	
5,700.0	5,672.2	5,771.5	5,671.4	12.6	18.0	77.96	-555.9	-97.0	277.1	249.7	27.43	10.103	
5,800.0	5,771.3	5,871.2	5,771.1	12.9	18.1	80.63	-556.5	-98.2	276.0	247.8	28.20	9.787	
5,900.0	5,870.5	5,971.1	5,871.0	13.1	18.2	83.35	-556.9	-99.2	275.2	246.2	28.95	9.505	
6,000.0	5,969.6	6,070.6	5,970.5	13.4	18.3	86.13	-557.0	-100.0	274.8	245.1	29.68	9.259	
6,025.2	5,994.6	6,095.7	5,995.6	13.5	18.4	86.84	-556.9	-100.2	274.8	244.9	29.86	9.203	
6,100.0	6,068.7	6,170.0	6,069.9	13.7	18.4	88.98	-556.7	-100.9	274.9	244.6	30.38	9.051	
6,200.0	6,167.9	6,269.3	6,169.2	14.0	18.5	91.88	-556.0	-101.7	275.7	244.6	31.04	8.881	
6,300.0	6,267.0	6,368.6	6,268.5	14.3	18.6	94.79	-555.2	-102.6	277.0	245.4	31.67	8.749	
6,400.0	6,366.1	6,470.1	6,369.9	14.6	18.7	97.84	-553.8	-103.0	278.6	246.4	32.24	8.642	
6,500.0	6,465.3	6,571.0	6,470.8	14.8	18.8	101.01	-551.3	-102.8	280.1	247.4	32.77	8.549	
6,600.0	6,564.4	6,670.4	6,570.2	15.1	18.8	104.19	-548.3	-102.1	282.1	248.8	33.23	8.487	
6,700.0	6,663.5	6,768.7	6,668.4	15.4	18.9	107.35	-545.1	-101.3	284.7	251.1	33.64	8.464	
6,800.0	6,762.7	6,864.3	6,763.9	15.7	18.9	110.40	-541.7	-101.3	288.9	255.0	33.98	8.504	
6,900.0	6,861.8	6,960.1	6,859.7	16.0	19.0	113.41	-538.0	-102.2	295.1	260.8	34.26	8.613	
7,000.0	6,960.9	7,056.5	6,955.9	16.2	19.0	116.40	-533.7	-103.8	302.9	268.4	34.49	8.781	
7,100.0	7,060.0	7,153.5	7,052.9	16.5	19.1	119.37	-528.7	-106.0	312.1	277.5	34.66	9.004	
7,200.0	7,159.2	7,251.9	7,151.0	16.8	19.1	122.33	-522.8	-108.1	322.3	287.5	34.78	9.265	
7,300.0	7,258.3	7,351.1	7,250.0	17.1	19.1	125.27	-516.2	-109.8	333.1	298.3	34.85	9.558	
7,400.0	7,357.4	7,451.3	7,350.0	17.4	19.2	128.17	-509.0	-110.8	344.3	309.4	34.88	9.870	
7,500.0	7,456.9	7,551.8	7,450.1	17.6	19.2	-173.14	-501.5	-111.0	354.2	319.4	34.87	10.160	
7,600.0	7,556.4	7,653.3	7,551.4	17.6	19.2	-82.64	-493.8	-110.7	357.8	322.9	34.93	10.245	
7,700.0	7,653.1	7,756.7	7,654.5	17.5	19.3	-78.61	-487.1	-109.7	354.5	319.3	35.19	10.073	
7,800.0	7,744.0	7,853.7	7,751.4	17.1	19.4	-83.00	-484.2	-108.4	346.5	311.0	35.49	9.763	
7,900.0	7,826.4	7,938.0	7,835.8	16.7	19.5	-90.30	-483.9	-106.9	340.6	305.1	35.49	9.598	
7,917.7	7,839.9	7,951.6	7,849.4	16.7	19.5	-91.67	-484.0	-106.7	340.4	305.0	35.43	9.608	
8,000.0	7,897.7	8,009.2	7,906.9	16.3	19.6	-97.60	-484.7	-105.5	345.3	310.3	34.97	9.874	
8,100.0	7,955.9	8,065.4	7,963.1	15.8	19.7	-102.53	-485.9	-104.3	367.5	333.3	34.20	10.746	
8,200.0	7,999.1	8,106.5	8,004.1	15.5	19.8	-103.65	-487.0	-103.4	410.0	376.3	33.73	12.155	
8,300.0	8,026.1	8,130.9	8,028.6	15.3	19.8	-99.83	-487.6	-102.8	470.2	436.3	33.88	13.877	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S29-T1N-R68W (Pratt/Waste Connections) - SRC PRATT 29XD (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
0.0	0.0	0.0	0.0	0.0	0.0	17.80	276.5	88.8	290.5				
100.0	100.0	90.0	90.0	0.2	0.2	17.80	276.5	88.8	290.4	290.1	0.31	939.900	
200.0	200.0	190.0	190.0	0.3	0.3	17.80	276.5	88.8	290.4	289.7	0.66	441.308	CC, ES
300.0	300.0	284.7	284.7	0.5	0.5	18.00	276.9	89.9	291.2	290.2	1.00	291.550	
400.0	400.0	378.6	378.5	0.7	0.7	18.66	278.4	94.0	294.1	292.7	1.34	219.097	
500.0	500.0	472.2	471.7	0.8	0.9	19.76	280.9	100.9	299.1	297.4	1.69	176.844	
600.0	600.0	565.1	564.1	1.0	1.1	21.24	284.5	110.6	306.3	304.3	2.05	149.717	
700.0	700.0	657.3	655.4	1.2	1.4	23.04	289.0	123.0	316.0	313.6	2.41	131.376	
800.0	800.0	748.6	745.2	1.4	1.7	25.09	294.5	137.9	328.3	325.5	2.77	118.680	
900.0	900.0	838.7	833.4	1.5	2.1	27.30	300.9	155.3	343.3	340.2	3.12	109.951	
1,000.0	1,000.0	933.5	925.7	1.7	2.5	29.67	308.4	175.7	360.8	357.3	3.48	103.597	
1,100.0	1,100.0	1,030.8	1,020.3	1.9	2.9	31.90	316.2	196.8	378.9	375.0	3.84	98.742	
1,200.0	1,200.0	1,128.1	1,115.0	2.1	3.3	33.92	323.9	217.9	397.5	393.3	4.18	95.015	
1,300.0	1,300.0	1,225.4	1,209.7	2.2	3.7	35.77	331.7	238.9	416.6	412.1	4.52	92.087	
1,400.0	1,400.0	1,322.7	1,304.4	2.4	4.1	37.45	339.4	260.0	436.1	431.2	4.86	89.740	
1,500.0	1,500.0	1,420.0	1,399.0	2.6	4.6	38.99	347.2	281.1	455.9	450.7	5.19	87.819	
1,600.0	1,600.0	1,517.3	1,493.7	2.8	5.0	40.41	354.9	302.1	475.9	470.4	5.52	86.218	
1,700.0	1,700.0	1,614.6	1,588.4	2.9	5.4	41.71	362.7	323.2	496.3	490.5	5.85	84.860	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 127-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	3.0	3.0	0.0	0.0	-3.25	339.9	-19.3	340.4				
100.0	100.0	102.5	102.5	0.2	0.2	-3.26	340.0	-19.3	340.5	340.2	0.31	1,089.737	ES
200.0	200.0	199.3	199.3	0.3	0.3	-3.28	340.4	-19.5	341.0	340.4	0.65	523.148	
300.0	300.0	299.1	299.1	0.5	0.5	-3.42	341.6	-20.4	342.2	341.2	1.00	341.646	
400.0	400.0	400.2	400.2	0.7	0.7	-3.63	342.5	-21.7	343.2	341.9	1.35	253.450	
500.0	500.0	497.9	497.8	0.8	0.9	-3.91	343.5	-23.5	344.4	342.7	1.70	202.194	
600.0	600.0	597.5	597.4	1.0	1.0	-4.50	344.8	-27.2	345.9	343.9	2.06	167.684	
700.0	700.0	697.8	697.6	1.2	1.2	-5.35	345.9	-32.4	347.5	345.0	2.43	142.998	
800.0	800.0	794.8	794.3	1.4	1.4	-6.26	347.3	-38.1	349.4	346.7	2.79	125.071	
900.0	900.0	890.5	889.9	1.5	1.6	-6.99	349.7	-42.9	352.5	349.4	3.15	111.803	
1,000.0	1,000.0	986.0	985.2	1.7	1.8	-7.61	353.3	-47.2	356.9	353.4	3.51	101.566	
1,100.0	1,100.0	1,080.8	1,079.8	1.9	2.0	-8.18	358.1	-51.5	362.5	358.7	3.87	93.591	
1,200.0	1,200.0	1,172.9	1,171.6	2.1	2.2	-8.69	364.3	-55.7	369.9	365.6	4.23	87.343	
1,300.0	1,300.0	1,261.4	1,259.5	2.2	2.4	-9.41	372.3	-61.7	379.8	375.2	4.61	82.460	
1,400.0	1,400.0	1,349.6	1,346.8	2.4	2.7	-10.32	382.4	-69.6	392.8	387.8	4.99	78.701	
1,500.0	1,500.0	1,438.5	1,434.4	2.6	2.9	-11.33	394.7	-79.1	408.3	402.9	5.39	75.754	
1,600.0	1,600.0	1,522.0	1,516.1	2.8	3.2	-12.39	407.8	-89.6	426.5	420.7	5.79	73.638	
1,700.0	1,700.0	1,616.0	1,607.7	2.9	3.6	-13.55	424.6	-102.4	447.0	440.8	6.22	71.846	
1,800.0	1,800.0	1,710.0	1,699.1	3.1	4.0	-14.64	442.0	-115.5	468.5	461.9	6.66	70.363	
1,900.0	1,900.0	1,803.0	1,789.3	3.3	4.4	-15.75	459.9	-129.7	491.2	484.1	7.11	69.136	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 217-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	2.56	319.9	14.3	320.3				
100.0	100.0	90.9	90.9	0.2	0.2	2.65	319.7	14.8	320.1	319.7	0.32	1,010.621	
200.0	200.0	191.9	191.9	0.3	0.3	2.97	319.2	16.6	319.6	318.9	0.67	474.130	
300.0	300.0	294.6	294.5	0.5	0.5	3.31	318.1	18.4	318.7	317.6	1.03	310.079	
400.0	400.0	393.1	393.1	0.7	0.7	3.18	316.9	17.6	317.4	316.0	1.37	232.095	
500.0	500.0	493.8	493.7	0.8	0.9	2.70	316.0	14.9	316.3	314.6	1.71	184.679	
600.0	600.0	595.7	595.6	1.0	1.0	2.00	314.6	11.0	314.8	312.8	2.06	152.500	
700.0	700.0	693.3	693.1	1.2	1.2	1.33	313.4	7.3	313.5	311.1	2.41	130.033	
800.0	800.0	793.0	792.7	1.4	1.4	0.91	312.5	5.0	312.6	309.8	2.76	113.223	
900.0	900.0	891.6	891.3	1.5	1.6	0.58	311.9	3.2	312.0	308.9	3.11	100.349	
1,000.0	1,000.0	991.9	991.6	1.7	1.8	0.23	311.5	1.3	311.5	308.1	3.46	90.029	
1,100.0	1,100.0	1,092.2	1,091.8	1.9	1.9	-0.18	310.9	-1.0	310.9	307.1	3.81	81.552	
1,200.0	1,200.0	1,192.0	1,191.7	2.1	2.1	-0.60	310.4	-3.2	310.4	306.3	4.16	74.544	
1,300.0	1,300.0	1,292.0	1,291.6	2.2	2.3	-1.04	309.8	-5.6	309.8	305.3	4.52	68.600	
1,400.0	1,400.0	1,393.2	1,392.7	2.4	2.5	-1.47	309.2	-7.9	309.3	304.4	4.87	63.507	
1,500.0	1,500.0	1,497.9	1,497.4	2.6	2.7	-1.92	307.5	-10.3	307.7	302.5	5.23	58.813	
1,600.0	1,600.0	1,600.7	1,600.0	2.8	2.9	-3.07	304.2	-16.3	304.8	299.2	5.60	54.407	
1,700.0	1,700.0	1,703.9	1,702.6	2.9	3.1	-4.97	299.7	-26.0	301.1	295.1	5.99	50.273	
1,800.0	1,800.0	1,804.4	1,802.1	3.1	3.3	-7.54	294.1	-38.9	296.9	290.5	6.39	46.435	
1,900.0	1,900.0	1,905.6	1,902.0	3.3	3.6	-10.66	287.5	-54.1	292.8	286.0	6.83	42.883	
2,000.0	2,000.0	2,008.1	2,002.7	3.5	3.9	-14.27	279.3	-71.1	288.4	281.1	7.30	39.517	
2,100.0	2,100.0	2,105.7	2,098.2	3.6	4.3	-179.40	270.4	-88.9	285.6	277.7	7.90	36.142	
2,128.9	2,128.9	2,133.5	2,125.3	3.7	4.4	179.37	267.7	-94.5	285.4	277.4	8.06	35.421	CC, ES
2,200.0	2,200.0	2,200.8	2,190.7	3.8	4.6	176.19	261.2	-109.0	286.5	278.1	8.45	33.925	
2,300.0	2,299.9	2,295.1	2,281.9	4.0	5.0	171.48	252.2	-131.5	292.3	283.3	9.01	32.460	
2,400.0	2,399.7	2,395.4	2,378.7	4.2	5.5	166.61	241.9	-155.7	301.4	291.8	9.59	31.436	
2,500.0	2,499.4	2,493.6	2,473.4	4.4	5.9	162.14	230.9	-179.2	313.4	303.2	10.15	30.871	
2,600.0	2,598.9	2,590.8	2,567.1	4.6	6.3	158.12	219.5	-202.1	328.1	317.4	10.69	30.680	SF
2,700.0	2,698.3	2,684.9	2,658.0	4.8	6.7	154.78	209.3	-224.0	346.1	334.9	11.20	30.902	
2,800.0	2,797.4	2,778.6	2,748.8	5.0	7.2	152.02	200.1	-245.6	367.1	355.4	11.71	31.349	
2,900.0	2,896.6	2,873.3	2,840.1	5.2	7.6	149.40	190.3	-268.8	389.9	377.7	12.24	31.855	
3,000.0	2,995.7	2,969.5	2,932.8	5.4	8.1	147.00	180.2	-292.3	413.2	400.4	12.77	32.354	
3,100.0	3,094.8	3,061.3	3,021.2	5.7	8.5	144.89	170.3	-315.3	437.6	424.3	13.28	32.939	
3,200.0	3,193.9	3,170.9	3,127.7	5.9	8.7	143.71	165.6	-338.2	462.8	449.2	13.55	34.162	
3,300.0	3,293.1	3,263.7	3,218.7	6.2	8.9	146.16	182.1	-339.0	485.1	471.1	13.97	34.720	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 211-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	4.0	4.0	0.0	0.0	5.77	310.4	31.4	312.0				
100.0	100.0	103.8	103.8	0.2	0.2	5.83	310.4	31.7	312.0	311.7	0.32	966.113	
200.0	200.0	203.6	203.6	0.3	0.3	5.99	310.4	32.6	312.1	311.4	0.66	471.447	ES
300.0	300.0	299.3	299.3	0.5	0.5	6.25	310.9	34.1	312.8	311.8	1.00	311.590	
400.0	400.0	390.3	390.2	0.7	0.7	6.64	313.3	36.4	315.7	314.4	1.34	235.870	
500.0	500.0	482.6	482.4	0.8	0.9	7.13	318.1	39.8	321.3	319.6	1.67	191.869	
600.0	600.0	572.0	571.3	1.0	1.1	7.69	325.0	43.9	329.6	327.6	2.00	164.401	
700.0	700.0	658.4	657.1	1.2	1.3	8.31	334.6	48.9	341.4	339.0	2.33	146.553	
800.0	800.0	745.6	743.1	1.4	1.6	9.03	347.3	55.2	356.9	354.2	2.65	134.427	
900.0	900.0	832.1	828.0	1.5	1.9	9.85	362.3	62.9	375.5	372.5	2.98	126.043	
1,000.0	1,000.0	921.2	914.8	1.7	2.3	10.80	380.1	72.5	397.1	393.8	3.31	120.051	
1,100.0	1,100.0	1,016.8	1,007.6	1.9	2.7	11.83	400.1	83.8	420.0	416.4	3.65	115.152	
1,200.0	1,200.0	1,105.0	1,093.0	2.1	3.1	12.79	418.8	95.1	443.6	439.6	3.98	111.580	
1,300.0	1,300.0	1,189.4	1,174.1	2.2	3.5	13.62	439.1	106.4	470.1	465.8	4.30	109.375	
1,400.0	1,400.0	1,277.1	1,258.0	2.4	4.0	14.25	462.0	117.4	498.5	493.9	4.63	107.639	
9,600.0	8,036.0	8,181.3	8,029.2	26.3	25.3	88.58	1,371.0	567.4	479.5	431.2	48.32	9.925	
9,700.0	8,036.0	8,181.4	8,029.2	27.7	25.3	88.59	1,371.0	567.4	448.4	398.6	49.79	9.006	
9,794.5	8,036.0	8,181.4	8,029.2	29.1	25.3	88.59	1,371.0	567.4	438.3	387.1	51.21	8.560	
9,800.0	8,036.0	8,181.4	8,029.2	29.2	25.3	88.59	1,371.0	567.4	438.4	387.1	51.29	8.547	
9,900.0	8,036.0	8,181.4	8,029.2	30.7	25.3	88.59	1,371.0	567.4	450.8	398.0	52.82	8.536	SF
10,000.0	8,036.0	8,181.4	8,029.3	32.2	25.3	88.60	1,371.0	567.4	484.1	429.7	54.37	8.904	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	25.69	256.1	123.2	284.4				
100.0	100.0	92.0	92.0	0.2	0.2	25.69	256.1	123.2	284.2	283.9	0.31	909.773	
200.0	200.0	192.0	192.0	0.3	0.3	25.69	256.1	123.2	284.2	283.6	0.66	429.704	
300.0	300.0	292.0	292.0	0.5	0.5	25.69	256.1	123.2	284.2	283.2	1.01	281.274	
400.0	400.0	392.0	392.0	0.7	0.7	25.69	256.1	123.2	284.2	282.9	1.36	209.060	
500.0	500.0	492.0	492.0	0.8	0.9	25.69	256.1	123.2	284.2	282.5	1.71	166.351	
600.0	600.0	592.0	592.0	1.0	1.0	25.69	256.1	123.2	284.2	282.2	2.06	138.132	
700.0	700.0	692.0	692.0	1.2	1.2	25.69	256.1	123.2	284.2	281.8	2.41	118.098	
800.0	800.0	792.0	792.0	1.4	1.4	25.69	256.1	123.2	284.2	281.5	2.76	103.140	
900.0	900.0	892.0	892.0	1.5	1.6	25.69	256.1	123.2	284.2	281.1	3.10	91.545	
1,000.0	1,000.0	992.0	992.0	1.7	1.7	25.69	256.1	123.2	284.2	280.8	3.45	82.293	
1,100.0	1,100.0	1,093.5	1,093.5	1.9	1.9	26.00	255.3	124.5	284.0	280.2	3.81	74.606	
1,200.0	1,200.0	1,194.9	1,194.8	2.1	2.1	27.02	252.3	128.6	283.2	279.1	4.16	68.006	
1,300.0	1,300.0	1,295.9	1,295.4	2.2	2.3	28.75	247.3	135.7	282.1	277.6	4.54	62.205	
1,400.0	1,400.0	1,396.1	1,394.8	2.4	2.5	31.20	240.3	145.5	281.0	276.0	4.93	57.039	
1,500.0	1,500.0	1,495.3	1,492.9	2.6	2.8	34.34	231.4	158.1	280.3	274.9	5.34	52.454	
1,528.4	1,528.4	1,523.3	1,520.4	2.6	2.8	35.35	228.6	162.1	280.2	274.7	5.47	51.264	CC, ES
1,600.0	1,600.0	1,593.6	1,589.4	2.8	3.0	38.08	220.8	173.0	280.5	274.8	5.78	48.545	
1,700.0	1,700.0	1,691.7	1,685.6	2.9	3.3	41.93	209.9	188.5	282.1	275.9	6.22	45.361	
1,800.0	1,800.0	1,789.8	1,781.9	3.1	3.7	45.72	198.9	204.0	285.1	278.4	6.66	42.815	
1,900.0	1,900.0	1,887.9	1,878.2	3.3	4.0	49.42	187.9	219.4	289.2	282.1	7.09	40.809	
2,000.0	2,000.0	1,986.0	1,974.4	3.5	4.3	53.01	176.9	234.9	294.6	287.1	7.50	39.254	
2,100.0	2,100.0	2,084.3	2,070.8	3.6	4.7	-104.83	166.0	250.4	301.3	293.2	8.18	36.830	
2,200.0	2,200.0	2,182.8	2,167.5	3.8	5.0	-101.90	155.0	265.9	309.4	300.8	8.65	35.791	
2,300.0	2,299.9	2,281.5	2,264.3	4.0	5.4	-99.42	143.9	281.5	318.5	309.4	9.11	34.975	
2,400.0	2,399.7	2,380.3	2,361.3	4.2	5.7	-97.35	132.9	297.0	328.4	318.8	9.57	34.307	
2,500.0	2,499.4	2,479.4	2,458.5	4.4	6.1	-95.68	121.8	312.6	338.8	328.7	10.04	33.732	
2,600.0	2,598.9	2,578.5	2,555.8	4.6	6.4	-94.38	110.7	328.3	349.5	339.0	10.53	33.208	
2,700.0	2,698.3	2,677.8	2,653.2	4.8	6.8	-93.43	99.6	343.9	360.5	349.5	11.02	32.705	
2,800.0	2,797.4	2,777.1	2,750.6	5.0	7.2	-92.82	88.5	359.6	371.7	360.2	11.54	32.208	
2,900.0	2,896.6	2,876.4	2,848.1	5.2	7.5	-92.35	77.4	375.2	382.9	370.8	12.07	31.731	
3,000.0	2,995.7	2,975.8	2,945.5	5.4	7.9	-91.90	66.3	390.9	394.1	381.5	12.60	31.281	
3,100.0	3,094.8	3,075.1	3,043.0	5.7	8.3	-91.48	55.2	406.5	405.3	392.2	13.14	30.858	
3,200.0	3,193.9	3,174.4	3,140.4	5.9	8.6	-91.08	44.1	422.2	416.6	402.9	13.68	30.461	
3,300.0	3,293.1	3,273.7	3,237.9	6.2	9.0	-90.70	33.0	437.9	427.9	413.7	14.22	30.087	
3,400.0	3,392.2	3,373.1	3,335.3	6.4	9.4	-90.34	21.9	453.5	439.2	424.4	14.77	29.737	
3,500.0	3,491.3	3,472.4	3,432.8	6.7	9.8	-90.00	10.8	469.2	450.5	435.2	15.32	29.407	
3,600.0	3,590.5	3,571.7	3,530.2	6.9	10.1	-89.67	-0.3	484.8	461.8	446.0	15.87	29.096	
3,700.0	3,689.6	3,671.0	3,627.7	7.2	10.5	-89.36	-11.4	500.5	473.2	456.7	16.43	28.804	
3,800.0	3,788.7	3,770.4	3,725.1	7.4	10.9	-89.07	-22.5	516.1	484.5	467.5	16.98	28.529	
3,900.0	3,887.9	3,869.7	3,822.6	7.7	11.3	-88.79	-33.6	531.8	495.9	478.4	17.54	28.269	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 8517-MWD

Offset Well Error: 0.0 ft

Reference 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
16,700.0	8,036.0	8,033.0	8,033.0	146.8	14.0	90.01	8,628.6	-21.3	418.9	258.2	160.78	2.606	
16,800.0	8,036.0	8,033.0	8,033.0	148.5	14.0	90.01	8,628.6	-21.3	318.9	156.4	162.52	1.962	
16,900.0	8,036.0	8,033.0	8,033.0	150.3	14.0	90.01	8,628.6	-21.3	218.9	54.7	164.27	1.333	Level 3
16,916.0	8,036.0	8,033.0	8,033.0	150.6	14.0	90.00	8,628.6	-21.3	202.9	38.4	164.55	1.233	Level 2, CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Pratt 4E-29H-P168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Reference Site:	S29-T1N-R68W (Pratt/Waste Connections)	**MD Reference:**	WELL @ 5189.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Pratt 4E-29H-P168	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5189.0ft (Original Well Elev)	Coordinates are relative to: Pratt 4E-29H-P168
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.31°