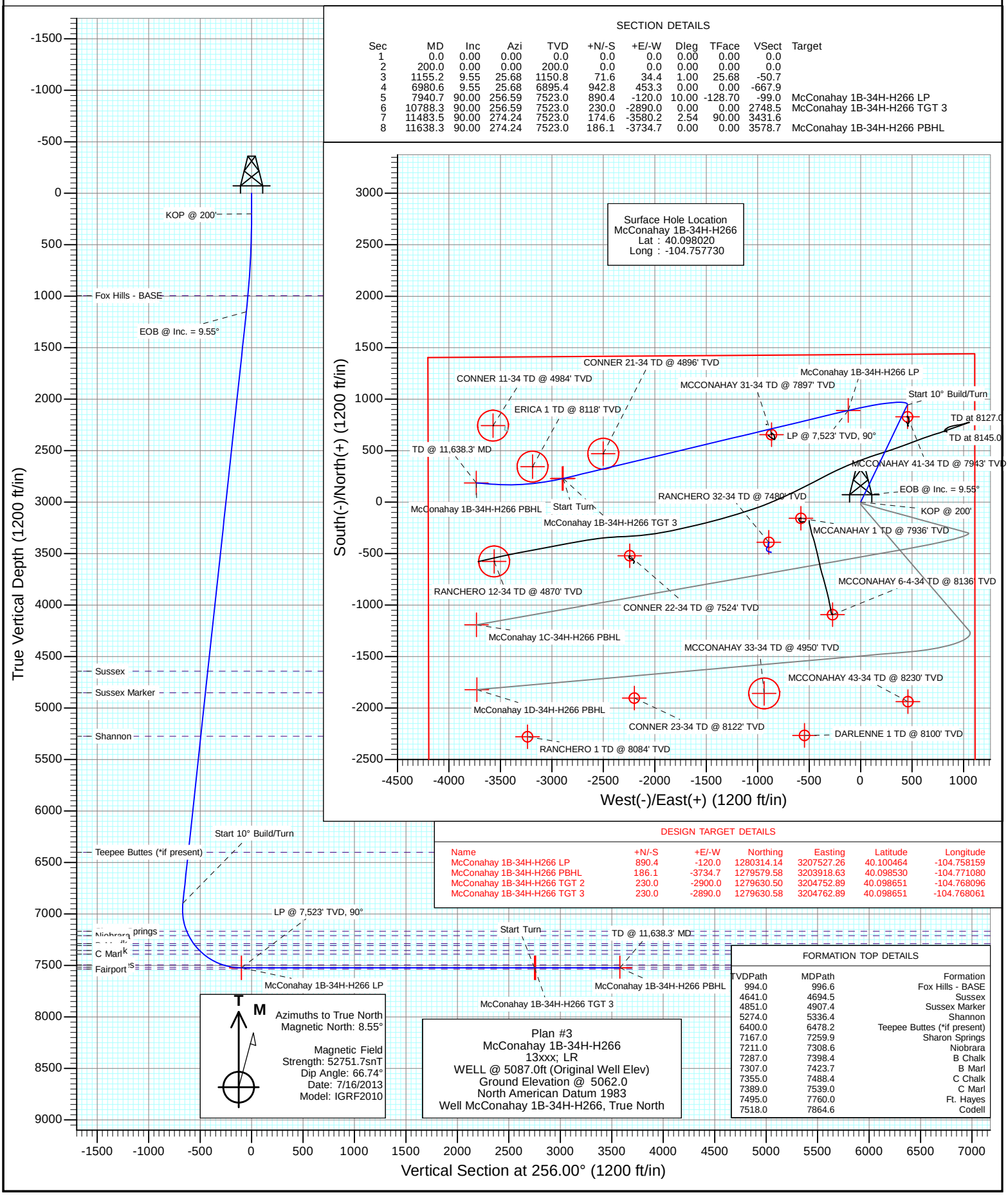
Project: DJ Wattenberg
Site: S34-T2N-R66W (McConahay)
Well: McConahay 1B-34H-H266
Wellbore: Hz
Design: Plan #3

encana natural gas

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1155.2	9.55	25.68	1150.8	71.6	34.4	1.00	25.68	-50.7	
4	6980.6	9.55	25.68	6895.4	942.8	453.3	0.00	0.00	-667.9	
5	7940.7	90.00	256.59	7523.0	890.4	-120.0	10.00	-128.70	-99.0	McConahay 1B-34H-H266 LP
6	10788.3	90.00	256.59	7523.0	230.0	-2890.0	0.00	0.00	2748.5	McConahay 1B-34H-H266 TGT 3
7	11483.5	90.00	274.24	7523.0	174.6	-3580.2	2.54	90.00	3431.6	
8	11638.3	90.00	274.24	7523.0	186.1	-3734.7	0.00	0.00	3578.7	McConahay 1B-34H-H266 PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
McConahay 1B-34H-H266 LP	890.4	-120.0	1280314.14	3207527.26	40.100464	-104.758159
McConahay 1B-34H-H266 PBHL	186.1	-3734.7	1279579.58	3203918.63	40.098530	-104.771080
McConahay 1B-34H-H266 TGT 2	230.0	-2900.0	1279630.50	3204752.89	40.098651	-104.768096
McConahay 1B-34H-H266 TGT 3	230.0	-2890.0	1279630.58	3204762.89	40.098651	-104.768061

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
994.0	996.6	Fox Hills - BASE
4641.0	4694.5	Sussex
4851.0	4907.4	Sussex Marker
5274.0	5336.4	Shannon
6400.0	6478.2	Teepee Buttes (*if present)
7167.0	7259.9	Sharon Springs
7211.0	7308.6	Niobrara
7287.0	7398.4	B Chalk
7307.0	7423.7	B Marl
7355.0	7488.4	C Chalk
7389.0	7539.0	C Marl
7495.0	7760.0	Ft. Hayes
7518.0	7864.6	Codell

T M

Azimuths to True North
Magnetic North: 8.55°

Magnetic Field
Strength: 52751.7snT
Dip Angle: 66.74°
Date: 7/16/2013
Model: IGRF2010

Plan #3
McConahay 1B-34H-H266
13xxx; LR
WELL @ 5087.0ft (Original Well Elev)
Ground Elevation @ 5062.0
North American Datum 1983
Well McConahay 1B-34H-H266, True North

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site:	S34-T2N-R66W (McConahay)	**North Reference:**	True
Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Project DJ Wattenberg

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

Site S34-T2N-R66W (McConahay)

Site Position:		**Northing:**	1,280,109.37 ft	**Latitude:**	40.099880
From:	Lat/Long	**Easting:**	3,208,491.04 ft	**Longitude:**	-104.754720
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.48 °

Well McConahay 1B-34H-H266

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,279,424.78 ft	**Latitude:**	40.098020
	+E/-W	0.0 ft	**Easting:**	3,207,654.71 ft	**Longitude:**	-104.757730
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,062.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/16/2013	8.55	66.74	52,752

Design Plan #3

Audit Notes:

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

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	256.00

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,155.2	9.55	25.68	1,150.8	71.6	34.4	1.00	1.00	0.00	25.68	
6,980.6	9.55	25.68	6,895.4	942.8	453.3	0.00	0.00	0.00	0.00	
7,940.7	90.00	256.59	7,523.0	890.4	-120.0	10.00	8.38	-13.45	-128.70	McConahay 1B-34H-H
10,788.3	90.00	256.59	7,523.0	230.0	-2,890.0	0.00	0.00	0.00	0.00	McConahay 1B-34H-H
11,483.5	90.00	274.24	7,523.0	174.6	-3,580.2	2.54	0.00	2.54	90.00	
11,638.3	90.00	274.24	7,523.0	186.1	-3,734.7	0.00	0.00	0.00	0.00	McConahay 1B-34H-H

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site:	S34-T2N-R66W (McConahay)	**North Reference:**	True
Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'
300.0	1.00	25.68	300.0	0.8	0.4	-0.6	1.00	1.00	
400.0	2.00	25.68	400.0	3.1	1.5	-2.2	1.00	1.00	
500.0	3.00	25.68	499.9	7.1	3.4	-5.0	1.00	1.00	
600.0	4.00	25.68	599.7	12.6	6.0	-8.9	1.00	1.00	
700.0	5.00	25.68	699.4	19.6	9.4	-13.9	1.00	1.00	
800.0	6.00	25.68	798.9	28.3	13.6	-20.0	1.00	1.00	
900.0	7.00	25.68	898.3	38.5	18.5	-27.3	1.00	1.00	
996.6	7.97	25.68	994.0	49.8	24.0	-35.3	1.00	1.00	Fox Hills - BASE
1,000.0	8.00	25.68	997.4	50.3	24.2	-35.6	1.00	1.00	
1,100.0	9.00	25.68	1,096.3	63.6	30.6	-45.0	1.00	1.00	
1,155.2	9.55	25.68	1,150.8	71.6	34.4	-50.7	1.00	1.00	EOB @ Inc. = 9.55°
1,200.0	9.55	25.68	1,195.0	78.3	37.6	-55.5	0.00	0.00	
1,300.0	9.55	25.68	1,293.6	93.2	44.8	-66.1	0.00	0.00	
1,400.0	9.55	25.68	1,392.2	108.2	52.0	-76.7	0.00	0.00	
1,500.0	9.55	25.68	1,490.8	123.2	59.2	-87.2	0.00	0.00	
1,600.0	9.55	25.68	1,589.4	138.1	66.4	-97.8	0.00	0.00	
1,700.0	9.55	25.68	1,688.0	153.1	73.6	-108.4	0.00	0.00	
1,800.0	9.55	25.68	1,786.6	168.0	80.8	-119.0	0.00	0.00	
1,900.0	9.55	25.68	1,885.3	183.0	88.0	-129.6	0.00	0.00	
2,000.0	9.55	25.68	1,983.9	197.9	95.2	-140.2	0.00	0.00	
2,100.0	9.55	25.68	2,082.5	212.9	102.4	-150.8	0.00	0.00	
2,200.0	9.55	25.68	2,181.1	227.8	109.5	-161.4	0.00	0.00	
2,300.0	9.55	25.68	2,279.7	242.8	116.7	-172.0	0.00	0.00	
2,400.0	9.55	25.68	2,378.3	257.8	123.9	-182.6	0.00	0.00	
2,500.0	9.55	25.68	2,476.9	272.7	131.1	-193.2	0.00	0.00	
2,600.0	9.55	25.68	2,575.6	287.7	138.3	-203.8	0.00	0.00	
2,700.0	9.55	25.68	2,674.2	302.6	145.5	-214.4	0.00	0.00	
2,800.0	9.55	25.68	2,772.8	317.6	152.7	-225.0	0.00	0.00	
2,900.0	9.55	25.68	2,871.4	332.5	159.9	-235.6	0.00	0.00	
3,000.0	9.55	25.68	2,970.0	347.5	167.1	-246.2	0.00	0.00	
3,100.0	9.55	25.68	3,068.6	362.4	174.3	-256.8	0.00	0.00	
3,200.0	9.55	25.68	3,167.2	377.4	181.4	-267.4	0.00	0.00	
3,300.0	9.55	25.68	3,265.8	392.4	188.6	-278.0	0.00	0.00	
3,400.0	9.55	25.68	3,364.5	407.3	195.8	-288.6	0.00	0.00	
3,500.0	9.55	25.68	3,463.1	422.3	203.0	-299.1	0.00	0.00	
3,600.0	9.55	25.68	3,561.7	437.2	210.2	-309.7	0.00	0.00	
3,700.0	9.55	25.68	3,660.3	452.2	217.4	-320.3	0.00	0.00	
3,800.0	9.55	25.68	3,758.9	467.1	224.6	-330.9	0.00	0.00	
3,900.0	9.55	25.68	3,857.5	482.1	231.8	-341.5	0.00	0.00	
4,000.0	9.55	25.68	3,956.1	497.0	239.0	-352.1	0.00	0.00	
4,100.0	9.55	25.68	4,054.8	512.0	246.2	-362.7	0.00	0.00	
4,200.0	9.55	25.68	4,153.4	527.0	253.4	-373.3	0.00	0.00	
4,300.0	9.55	25.68	4,252.0	541.9	260.5	-383.9	0.00	0.00	
4,400.0	9.55	25.68	4,350.6	556.9	267.7	-394.5	0.00	0.00	
4,500.0	9.55	25.68	4,449.2	571.8	274.9	-405.1	0.00	0.00	
4,600.0	9.55	25.68	4,547.8	586.8	282.1	-415.7	0.00	0.00	
4,694.5	9.55	25.68	4,641.0	600.9	288.9	-425.7	0.00	0.00	Sussex
4,700.0	9.55	25.68	4,646.4	601.7	289.3	-426.3	0.00	0.00	
4,800.0	9.55	25.68	4,745.0	616.7	296.5	-436.9	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site:	S34-T2N-R66W (McConahay)	**North Reference:**	True
Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,900.0	9.55	25.68	4,843.7	631.6	303.7	-447.5	0.00	0.00	
4,907.4	9.55	25.68	4,851.0	632.8	304.2	-448.3	0.00	0.00	Sussex Marker
5,000.0	9.55	25.68	4,942.3	646.6	310.9	-458.1	0.00	0.00	
5,100.0	9.55	25.68	5,040.9	661.6	318.1	-468.7	0.00	0.00	
5,200.0	9.55	25.68	5,139.5	676.5	325.3	-479.3	0.00	0.00	
5,300.0	9.55	25.68	5,238.1	691.5	332.4	-489.9	0.00	0.00	
5,336.4	9.55	25.68	5,274.0	696.9	335.1	-493.7	0.00	0.00	Shannon
5,400.0	9.55	25.68	5,336.7	706.4	339.6	-500.4	0.00	0.00	
5,500.0	9.55	25.68	5,435.3	721.4	346.8	-511.0	0.00	0.00	
5,600.0	9.55	25.68	5,534.0	736.3	354.0	-521.6	0.00	0.00	
5,700.0	9.55	25.68	5,632.6	751.3	361.2	-532.2	0.00	0.00	
5,800.0	9.55	25.68	5,731.2	766.2	368.4	-542.8	0.00	0.00	
5,900.0	9.55	25.68	5,829.8	781.2	375.6	-553.4	0.00	0.00	
6,000.0	9.55	25.68	5,928.4	796.2	382.8	-564.0	0.00	0.00	
6,100.0	9.55	25.68	6,027.0	811.1	390.0	-574.6	0.00	0.00	
6,200.0	9.55	25.68	6,125.6	826.1	397.2	-585.2	0.00	0.00	
6,300.0	9.55	25.68	6,224.3	841.0	404.3	-595.8	0.00	0.00	
6,400.0	9.55	25.68	6,322.9	856.0	411.5	-606.4	0.00	0.00	
6,478.2	9.55	25.68	6,400.0	867.7	417.2	-614.7	0.00	0.00	Teepee Buttes (*if present)
6,500.0	9.55	25.68	6,421.5	870.9	418.7	-617.0	0.00	0.00	
6,600.0	9.55	25.68	6,520.1	885.9	425.9	-627.6	0.00	0.00	
6,700.0	9.55	25.68	6,618.7	900.8	433.1	-638.2	0.00	0.00	
6,800.0	9.55	25.68	6,717.3	915.8	440.3	-648.8	0.00	0.00	
6,900.0	9.55	25.68	6,815.9	930.8	447.5	-659.4	0.00	0.00	
6,980.6	9.55	25.68	6,895.4	942.8	453.3	-667.9	0.00	0.00	Start 10° Build/Turn
7,000.0	8.47	15.36	6,914.6	945.6	454.4	-669.6	10.00	-5.56	
7,050.0	7.50	339.42	6,964.1	952.3	454.2	-671.1	10.00	-1.95	
7,100.0	9.51	307.85	7,013.6	957.8	449.8	-668.1	10.00	4.01	
7,150.0	13.20	290.43	7,062.6	962.4	441.2	-660.9	10.00	7.39	
7,200.0	17.54	280.99	7,110.8	965.8	428.4	-649.3	10.00	8.69	
7,250.0	22.16	275.29	7,157.9	968.1	411.6	-633.6	10.00	9.23	
7,259.9	23.09	274.43	7,167.0	968.4	407.8	-630.0	10.00	9.42	Sharon Springs
7,300.0	26.91	271.50	7,203.3	969.3	390.9	-613.8	10.00	9.52	
7,308.6	27.74	270.97	7,211.0	969.4	386.9	-610.0	10.00	9.59	Niobrara
7,350.0	31.73	268.79	7,246.9	969.3	366.4	-590.0	10.00	9.65	
7,398.4	36.44	266.78	7,287.0	968.2	339.3	-563.5	10.00	9.73	B Chalk
7,400.0	36.59	266.72	7,288.3	968.2	338.4	-562.6	10.00	9.76	
7,423.7	38.91	265.90	7,307.0	967.2	323.9	-548.3	10.00	9.77	B Marl
7,450.0	41.49	265.08	7,327.1	965.9	307.0	-531.5	10.00	9.80	
7,488.4	45.26	264.03	7,355.0	963.4	280.7	-505.5	10.00	9.82	C Chalk
7,500.0	46.40	263.74	7,363.1	962.5	272.5	-497.2	10.00	9.84	
7,539.0	50.24	262.83	7,389.0	959.1	243.6	-468.4	10.00	9.85	C Marl
7,550.0	51.32	262.59	7,396.0	958.0	235.1	-459.9	10.00	9.86	
7,600.0	56.26	261.60	7,425.5	952.4	195.2	-419.8	10.00	9.87	
7,650.0	61.20	260.71	7,451.4	945.9	152.9	-377.2	10.00	9.88	
7,700.0	66.15	259.90	7,473.6	938.3	108.8	-332.5	10.00	9.89	
7,750.0	71.10	259.15	7,491.8	929.8	63.0	-286.1	10.00	9.90	
7,760.0	72.09	259.01	7,495.0	928.0	53.7	-276.6	10.00	9.91	Ft. Hayes
7,800.0	76.05	258.45	7,506.0	920.5	16.0	-238.2	10.00	9.91	
7,850.0	81.01	257.77	7,515.9	910.4	-32.0	-189.2	10.00	9.91	
7,864.6	82.46	257.58	7,518.0	907.4	-46.1	-174.8	10.00	9.91	Codell
7,900.0	85.97	257.12	7,521.6	899.6	-80.4	-139.6	10.00	9.91	

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site:	S34-T2N-R66W (McConahay)	**North Reference:**	True
Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
7,940.7	90.00	256.59	7,523.0	890.4	-120.0	-99.0	10.00	9.92	LP @ 7,523' TVD, 90°
8,000.0	90.00	256.59	7,523.0	876.6	-177.7	-39.6	0.00	0.00	
8,100.0	90.00	256.59	7,523.0	853.4	-275.0	60.4	0.00	0.00	
8,200.0	90.00	256.59	7,523.0	830.3	-372.3	160.3	0.00	0.00	
8,300.0	90.00	256.59	7,523.0	807.1	-469.5	260.3	0.00	0.00	
8,400.0	90.00	256.59	7,523.0	783.9	-566.8	360.3	0.00	0.00	
8,500.0	90.00	256.59	7,523.0	760.7	-664.1	460.3	0.00	0.00	
8,600.0	90.00	256.59	7,523.0	737.5	-761.4	560.3	0.00	0.00	
8,700.0	90.00	256.59	7,523.0	714.3	-858.6	660.3	0.00	0.00	
8,800.0	90.00	256.59	7,523.0	691.1	-955.9	760.3	0.00	0.00	
8,900.0	90.00	256.59	7,523.0	667.9	-1,053.2	860.3	0.00	0.00	
9,000.0	90.00	256.59	7,523.0	644.7	-1,150.5	960.3	0.00	0.00	
9,100.0	90.00	256.59	7,523.0	621.5	-1,247.7	1,060.3	0.00	0.00	
9,200.0	90.00	256.59	7,523.0	598.3	-1,345.0	1,160.3	0.00	0.00	
9,300.0	90.00	256.59	7,523.0	575.2	-1,442.3	1,260.3	0.00	0.00	
9,400.0	90.00	256.59	7,523.0	552.0	-1,539.5	1,360.3	0.00	0.00	
9,500.0	90.00	256.59	7,523.0	528.8	-1,636.8	1,460.3	0.00	0.00	
9,600.0	90.00	256.59	7,523.0	505.6	-1,734.1	1,560.3	0.00	0.00	
9,700.0	90.00	256.59	7,523.0	482.4	-1,831.4	1,660.3	0.00	0.00	
9,800.0	90.00	256.59	7,523.0	459.2	-1,928.6	1,760.3	0.00	0.00	
9,900.0	90.00	256.59	7,523.0	436.0	-2,025.9	1,860.3	0.00	0.00	
10,000.0	90.00	256.59	7,523.0	412.8	-2,123.2	1,960.3	0.00	0.00	
10,100.0	90.00	256.59	7,523.0	389.6	-2,220.5	2,060.2	0.00	0.00	
10,200.0	90.00	256.59	7,523.0	366.4	-2,317.7	2,160.2	0.00	0.00	
10,300.0	90.00	256.59	7,523.0	343.2	-2,415.0	2,260.2	0.00	0.00	
10,400.0	90.00	256.59	7,523.0	320.1	-2,512.3	2,360.2	0.00	0.00	
10,500.0	90.00	256.59	7,523.0	296.9	-2,609.6	2,460.2	0.00	0.00	
10,600.0	90.00	256.59	7,523.0	273.7	-2,706.8	2,560.2	0.00	0.00	
10,700.0	90.00	256.59	7,523.0	250.5	-2,804.1	2,660.2	0.00	0.00	
10,788.3	90.00	256.59	7,523.0	230.0	-2,890.0	2,748.5	0.00	0.00	Start Turn
10,800.0	90.00	256.89	7,523.0	227.3	-2,901.4	2,760.2	2.54	0.00	
10,900.0	90.00	259.43	7,523.0	206.8	-2,999.2	2,860.1	2.54	0.00	
11,000.0	90.00	261.96	7,523.0	190.6	-3,097.9	2,959.8	2.54	0.00	
11,100.0	90.00	264.50	7,523.0	178.8	-3,197.2	3,059.0	2.54	0.00	
11,200.0	90.00	267.04	7,523.0	171.5	-3,296.9	3,157.5	2.54	0.00	
11,300.0	90.00	269.58	7,523.0	168.5	-3,396.9	3,255.2	2.54	0.00	
11,400.0	90.00	272.12	7,523.0	170.0	-3,496.9	3,351.9	2.54	0.00	
11,483.5	90.00	274.24	7,523.0	174.6	-3,580.2	3,431.6	2.54	0.00	Hold
11,500.0	90.00	274.24	7,523.0	175.9	-3,596.7	3,447.3	0.00	0.00	
11,600.0	90.00	274.24	7,523.0	183.2	-3,696.4	3,542.3	0.00	0.00	
11,638.3	90.00	274.24	7,523.0	186.1	-3,734.7	3,578.7	0.00	0.00	TD @ 11,638.3' MD

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site:	S34-T2N-R66W (McConahay)	**North Reference:**	True
Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
McConahay 1B-34H-H2(	0.00	0.00	7,523.0	230.0	-2,900.0	1,279,630.50	3,204,752.89	40.098651	-104.768096
- plan misses target center by 2.3ft at 10798.0ft MD (7523.0 TVD, 227.8 N, -2899.5 E)									
- Point									
McConahay 1B-34H-H2(	0.00	0.00	7,523.0	230.0	-2,890.0	1,279,630.58	3,204,762.89	40.098651	-104.768061
- plan hits target center									
- Point									
McConahay 1B-34H-H2(	0.00	0.00	7,523.0	186.1	-3,734.7	1,279,579.58	3,203,918.63	40.098530	-104.771080
- plan hits target center									
- Point									
McConahay 1B-34H-H2(	0.00	0.00	7,523.0	890.4	-120.0	1,280,314.14	3,207,527.26	40.100464	-104.758159
- plan hits target center									
- Point									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
996.6	994.0	Fox Hills - BASE			
4,694.5	4,641.0	Sussex			
4,907.4	4,851.0	Sussex Marker			
5,336.4	5,274.0	Shannon			
6,478.2	6,400.0	Teepee Buttes (*if present)			
7,259.9	7,167.0	Sharon Springs			
7,308.6	7,211.0	Niobrara			
7,398.4	7,287.0	B Chalk			
7,423.7	7,307.0	B Marl			
7,488.4	7,355.0	C Chalk			
7,539.0	7,389.0	C Marl			
7,760.0	7,495.0	Ft. Hayes			
7,864.6	7,518.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
200.0	200.0	0.0	0.0	KOP @ 200'
1,155.2	1,150.8	71.6	34.4	EOB @ Inc. = 9.55°
6,980.6	6,895.4	942.8	453.3	Start 10° Build/Turn
7,940.7	7,523.0	890.4	-120.0	LP @ 7,523' TVD, 90°
10,788.3	7,523.0	230.0	-2,890.0	Start Turn
11,483.5	7,523.0	174.6	-3,580.2	Hold
11,638.3	7,523.0	186.1	-3,734.7	TD @ 11,638.3' MD

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S34-T2N-R66W (McConahay)
McConahay 1B-34H-H266
Hz
Plan #3

Anticollision Report

20 August, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Reference	Plan #3

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,410.7ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 8/20/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,638.3	Plan #3 (Hz)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S26-T2N-R66W (Rodman Bruntz)						
BADDING-USX W 35-4 (EXISTING) - Existing - Existing	7,019.5	6,932.9	1,310.5	1,277.5	39.641	CC, ES, SF
Rodman Bruntz 2A-26H - DD - Plan #2	7,100.0	12,875.9	874.3	756.6	7.425	SF
Rodman Bruntz 2A-26H - DD - Plan #2	7,181.7	12,869.1	864.9	750.7	7.571	CC, ES
SHAFER 4-35A (EXISTING) - Existing - Existing	7,022.3	6,929.6	1,078.5	1,045.6	32.835	CC, ES, SF
S34-T2N-R66W (McConahay)						
CONNER 11-34 (EXISTING) - MACEY & MERSHON WE						Out of range
CONNER 21-34 (EXISTING) - FOUNDATION WELL - NO						Out of range
CONNER 22-34 (EXISTING) - ENCANA WELL - GYRO	10,333.3	7,466.2	879.8	807.9	12.237	CC, ES
CONNER 22-34 (EXISTING) - ENCANA WELL - GYRO	10,600.0	7,466.8	919.3	841.1	11.748	SF
ERICA 1 (EXISTING) - GREAT WESTERN WELL - NO S	11,073.2	7,440.0	164.6	67.6	1.697	CC, ES, SF
MCCONAHAY 1 (EXISTING) - ENCANA WELL - GYRO	100.0	86.0	580.1	580.0	4,425.968	CC
MCCONAHAY 1 (EXISTING) - ENCANA WELL - GYRO	200.0	183.1	580.3	580.0	1,535.409	ES
MCCONAHAY 1 (EXISTING) - ENCANA WELL - GYRO	9,200.0	7,508.2	1,075.1	1,029.7	23.679	SF
McConahay 1A-34H - Hz - Hz	7,266.3	7,491.9	406.8	373.9	12.350	CC, ES
McConahay 1A-34H - Hz - Hz	11,300.0	11,552.1	705.9	526.0	3.923	SF
McConahay 1C-34H-H266 - Hz - Plan #1	200.0	200.0	10.9	10.3	17.890	CC, ES
McConahay 1C-34H-H266 - Hz - Plan #1	11,638.3	11,987.9	1,356.5	1,163.7	7.034	SF
McConahay 1D-34H-H266 - Hz - Plan #1	166.3	167.3	21.9	21.4	44.148	CC
McConahay 1D-34H-H266 - Hz - Plan #1	200.0	201.0	21.9	21.2	35.678	ES
McConahay 1D-34H-H266 - Hz - Plan #1	500.0	499.6	34.9	33.3	20.948	SF
MCCONAHAY 31-34 (EXISTING) - ENCANA WELL - GY	8,720.3	7,520.9	53.7	18.7	1.536	CC, ES, SF
MCCONAHAY 31-34 (EXISTING) MRP - MACHII-ROSS	2,372.8	2,299.5	1,153.1	1,142.6	109.525	CC
MCCONAHAY 31-34 (EXISTING) MRP - MACHII-ROSS	2,600.0	2,523.6	1,153.7	1,142.1	98.779	ES
MCCONAHAY 31-34 (EXISTING) MRP - MACHII-ROSS	5,100.0	4,861.0	1,245.3	1,221.8	52.907	SF
MCCONAHAY 41-34 (EXISTING) - ENCANA WELL - GY	6,406.7	6,318.0	52.1	26.5	2.038	CC, ES, SF
MCCONAHAY 6-4-34 (EXISTING) - ENCANA WELL - SU	100.0	75.0	532.4	532.2	2,016.465	CC
MCCONAHAY 6-4-34 (EXISTING) - ENCANA WELL - SU	200.0	174.7	532.5	531.9	865.349	ES
MCCONAHAY 6-4-34 (EXISTING) - ENCANA WELL - SU	4,000.0	3,750.4	1,375.0	1,359.0	85.935	SF
RANCHERO 12-34 (EXISTING) - MACHII-ROSS WELL						Out of range
RANCHERO 32-34 (EXISTING) - ENCANA WELL - GYR	100.0	86.0	997.2	997.1	7,608.018	CC
RANCHERO 32-34 (EXISTING) - ENCANA WELL - GYR	200.0	181.8	997.4	997.0	2,645.506	ES
RANCHERO 32-34 (EXISTING) - ENCANA WELL - GYR	9,600.0	7,482.0	1,230.0	1,175.5	22.556	SF
S34-T2N-R68W (Billings, Erica)						
Erica 1 - DD - DD	11,372.4	7,453.2	561.9	464.5	5.771	CC
Erica 1 - DD - DD	11,400.0	7,453.1	562.4	464.5	5.743	ES
Erica 1 - DD - DD	11,500.0	7,452.7	572.7	472.8	5.730	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T2N-R66W (Rodman Bruntz) - BADDING-USX W 35-4 (EXISTING) - Existing - Existing

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
5,700.0	5,632.6	5,631.6	5,631.6	17.7	9.8	59.00	890.7	1,764.0	1,409.8	1,383.9	25.85	54.528	
5,800.0	5,731.2	5,730.2	5,730.2	18.1	10.0	59.58	890.7	1,764.0	1,401.2	1,374.8	26.39	53.094	
5,900.0	5,829.8	5,828.8	5,828.8	18.4	10.2	60.16	890.7	1,764.0	1,392.8	1,365.8	26.93	51.719	
6,000.0	5,928.4	5,927.4	5,927.4	18.8	10.3	60.75	890.7	1,764.0	1,384.5	1,357.0	27.47	50.399	
6,100.0	6,027.0	6,026.0	6,026.0	19.1	10.5	61.34	890.7	1,764.0	1,376.4	1,348.4	28.01	49.132	
6,200.0	6,125.6	6,124.6	6,124.6	19.4	10.7	61.95	890.7	1,764.0	1,368.4	1,339.9	28.56	47.914	
6,300.0	6,224.3	6,223.3	6,223.3	19.8	10.9	62.56	890.7	1,764.0	1,360.6	1,331.5	29.11	46.745	
6,400.0	6,322.9	6,321.9	6,321.9	20.1	11.0	63.17	890.7	1,764.0	1,353.0	1,323.3	29.66	45.621	
6,500.0	6,421.5	6,420.5	6,420.5	20.5	11.2	63.80	890.7	1,764.0	1,345.5	1,315.3	30.21	44.540	
6,600.0	6,520.1	6,519.1	6,519.1	20.8	11.4	64.43	890.7	1,764.0	1,338.1	1,307.4	30.76	43.501	
6,700.0	6,618.7	6,617.7	6,617.7	21.1	11.6	65.07	890.7	1,764.0	1,331.0	1,299.7	31.32	42.502	
6,800.0	6,717.3	6,716.3	6,716.3	21.5	11.7	65.71	890.7	1,764.0	1,324.0	1,292.1	31.87	41.541	
6,900.0	6,815.9	6,814.9	6,814.9	21.8	11.9	66.36	890.7	1,764.0	1,317.2	1,284.7	32.43	40.617	
7,000.0	6,914.6	6,913.6	6,913.6	22.1	12.1	77.18	890.7	1,764.0	1,310.8	1,277.9	32.99	39.738	
7,019.5	6,933.9	6,932.9	6,932.9	22.2	12.1	90.00	890.7	1,764.0	1,310.5	1,277.5	33.06	39.641	CC, ES, SF
7,100.0	7,013.6	7,012.6	7,012.6	22.3	12.2	144.71	890.7	1,764.0	1,316.0	1,282.9	33.09	39.774	
7,200.0	7,110.8	7,109.8	7,109.8	22.4	12.4	171.85	890.7	1,764.0	1,337.7	1,305.3	32.44	41.236	
7,300.0	7,203.3	7,202.3	7,202.3	22.3	12.6	-178.01	890.7	1,764.0	1,375.4	1,344.3	31.09	44.232	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T2N-R66W (Rodman Bruntz) - Rodman Bruntz 2A-26H - DD - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
6,300.0	6,224.3	12,992.7	7,315.0	19.8	100.8	76.53	841.1	1,267.2	1,397.8	1,277.8	120.00	11.649	
6,400.0	6,322.9	12,977.8	7,315.0	20.1	100.5	75.49	856.1	1,267.2	1,317.0	1,196.9	120.07	10.969	
6,500.0	6,421.5	12,962.8	7,315.0	20.5	100.3	74.45	871.0	1,267.2	1,238.7	1,118.6	120.10	10.314	
6,600.0	6,520.1	12,947.8	7,315.0	20.8	100.0	73.39	886.0	1,267.2	1,163.6	1,043.5	120.09	9.690	
6,700.0	6,618.7	12,932.9	7,315.0	21.1	99.7	72.33	900.9	1,267.2	1,092.3	972.3	120.03	9.100	
6,800.0	6,717.3	12,917.9	7,315.0	21.5	99.5	71.27	915.9	1,267.2	1,025.6	905.6	119.94	8.551	
6,900.0	6,815.9	12,903.0	7,315.0	21.8	99.2	70.20	930.8	1,267.2	964.4	844.6	119.80	8.050	
7,000.0	6,914.6	12,888.1	7,315.0	22.1	99.0	78.98	945.7	1,267.2	910.1	790.5	119.62	7.608	
7,100.0	7,013.6	12,875.9	7,315.0	22.3	98.8	143.90	957.9	1,267.2	874.3	756.6	117.76	7.425	SF
7,181.7	7,093.3	12,869.1	7,315.0	22.4	98.7	166.64	964.8	1,267.2	864.9	750.7	114.25	7.571	CC, ES
7,200.0	7,110.8	12,867.9	7,315.0	22.4	98.6	169.33	965.9	1,267.2	865.4	752.2	113.23	7.643	
7,300.0	7,203.3	12,864.5	7,315.0	22.3	98.6	178.42	969.4	1,267.2	884.5	778.3	106.26	8.324	
7,400.0	7,288.3	12,865.6	7,315.0	22.1	98.6	-176.04	968.2	1,267.2	929.5	832.3	97.20	9.562	
7,500.0	7,363.1	12,871.2	7,315.0	21.8	98.7	-170.58	962.6	1,267.2	995.5	908.8	86.64	11.490	
7,600.0	7,425.5	12,881.3	7,315.0	21.5	98.9	-162.76	952.5	1,267.2	1,076.8	1,001.2	75.59	14.245	
7,700.0	7,473.6	12,895.4	7,315.0	21.2	99.1	-147.95	938.4	1,267.2	1,168.0	1,102.0	66.05	17.684	
7,800.0	7,506.0	12,913.2	7,315.0	21.0	99.4	-115.39	920.6	1,267.2	1,264.4	1,203.9	60.42	20.926	
7,900.0	7,521.6	12,934.1	7,315.0	20.9	99.8	-70.78	899.8	1,267.2	1,362.0	1,307.4	54.60	24.944	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T2N-R66W (Rodman Bruntz) - SHAFER 4-35A (EXISTING) - Existing - Existing

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
3,700.0	3,660.3	3,653.3	3,653.3	11.0	6.4	44.41	939.2	1,533.3	1,403.1	1,387.8	15.30	91.701	
3,800.0	3,758.9	3,751.9	3,751.9	11.3	6.5	44.89	939.2	1,533.3	1,391.2	1,375.4	15.78	88.176	
3,900.0	3,857.5	3,850.5	3,850.5	11.7	6.7	45.37	939.2	1,533.3	1,379.4	1,363.1	16.26	84.847	
4,000.0	3,956.1	3,949.1	3,949.1	12.0	6.9	45.86	939.2	1,533.3	1,367.7	1,351.0	16.74	81.700	
4,100.0	4,054.8	4,047.8	4,047.8	12.3	7.1	46.36	939.2	1,533.3	1,356.1	1,338.9	17.23	78.720	
4,200.0	4,153.4	4,146.4	4,146.4	12.7	7.2	46.87	939.2	1,533.3	1,344.6	1,326.9	17.72	75.896	
4,300.0	4,252.0	4,245.0	4,245.0	13.0	7.4	47.39	939.2	1,533.3	1,333.3	1,315.1	18.21	73.217	
4,400.0	4,350.6	4,343.6	4,343.6	13.4	7.6	47.91	939.2	1,533.3	1,322.0	1,303.3	18.71	70.671	
4,500.0	4,449.2	4,442.2	4,442.2	13.7	7.8	48.45	939.2	1,533.3	1,310.9	1,291.6	19.21	68.252	
4,600.0	4,547.8	4,540.8	4,540.8	14.0	7.9	48.99	939.2	1,533.3	1,299.8	1,280.1	19.71	65.950	
4,700.0	4,646.4	4,639.4	4,639.4	14.4	8.1	49.54	939.2	1,533.3	1,288.9	1,268.7	20.22	63.757	
4,800.0	4,745.0	4,738.0	4,738.0	14.7	8.3	50.10	939.2	1,533.3	1,278.1	1,257.4	20.73	61.667	
4,900.0	4,843.7	4,836.7	4,836.7	15.0	8.4	50.67	939.2	1,533.3	1,267.4	1,246.2	21.24	59.674	
5,000.0	4,942.3	4,935.3	4,935.3	15.4	8.6	51.25	939.2	1,533.3	1,256.9	1,235.1	21.76	57.772	
5,100.0	5,040.9	5,033.9	5,033.9	15.7	8.8	51.84	939.2	1,533.3	1,246.5	1,224.2	22.28	55.956	
5,200.0	5,139.5	5,132.5	5,132.5	16.1	9.0	52.44	939.2	1,533.3	1,236.2	1,213.4	22.80	54.220	
5,300.0	5,238.1	5,231.1	5,231.1	16.4	9.1	53.05	939.2	1,533.3	1,226.1	1,202.8	23.33	52.560	
5,400.0	5,336.7	5,329.7	5,329.7	16.7	9.3	53.67	939.2	1,533.3	1,216.1	1,192.2	23.86	50.972	
5,500.0	5,435.3	5,428.3	5,428.3	17.1	9.5	54.30	939.2	1,533.3	1,206.3	1,181.9	24.39	49.453	
5,600.0	5,534.0	5,527.0	5,527.0	17.4	9.6	54.94	939.2	1,533.3	1,196.6	1,171.6	24.93	47.998	
5,700.0	5,632.6	5,625.6	5,625.6	17.7	9.8	55.59	939.2	1,533.3	1,187.0	1,161.5	25.47	46.605	
5,800.0	5,731.2	5,724.2	5,724.2	18.1	10.0	56.25	939.2	1,533.3	1,177.6	1,151.6	26.01	45.270	
5,900.0	5,829.8	5,822.8	5,822.8	18.4	10.2	56.92	939.2	1,533.3	1,168.4	1,141.8	26.56	43.990	
6,000.0	5,928.4	5,921.4	5,921.4	18.8	10.3	57.60	939.2	1,533.3	1,159.3	1,132.2	27.11	42.764	
6,100.0	6,027.0	6,020.0	6,020.0	19.1	10.5	58.29	939.2	1,533.3	1,150.4	1,122.8	27.66	41.587	
6,200.0	6,125.6	6,118.6	6,118.6	19.4	10.7	58.99	939.2	1,533.3	1,141.7	1,113.5	28.22	40.459	
6,300.0	6,224.3	6,217.3	6,217.3	19.8	10.9	59.70	939.2	1,533.3	1,133.2	1,104.4	28.78	39.376	
6,400.0	6,322.9	6,315.9	6,315.9	20.1	11.0	60.43	939.2	1,533.3	1,124.8	1,095.5	29.34	38.337	
6,500.0	6,421.5	6,414.5	6,414.5	20.5	11.2	61.16	939.2	1,533.3	1,116.6	1,086.7	29.90	37.340	
6,600.0	6,520.1	6,513.1	6,513.1	20.8	11.4	61.90	939.2	1,533.3	1,108.6	1,078.1	30.47	36.384	
6,700.0	6,618.7	6,611.7	6,611.7	21.1	11.5	62.66	939.2	1,533.3	1,100.8	1,069.8	31.04	35.465	
6,800.0	6,717.3	6,710.3	6,710.3	21.5	11.7	63.42	939.2	1,533.3	1,093.2	1,061.6	31.61	34.584	
6,900.0	6,815.9	6,808.9	6,808.9	21.8	11.9	64.19	939.2	1,533.3	1,085.8	1,053.6	32.18	33.738	
7,000.0	6,914.6	6,907.6	6,907.6	22.1	12.1	75.15	939.2	1,533.3	1,078.9	1,046.2	32.76	32.935	
7,022.3	6,936.6	6,929.6	6,929.6	22.2	12.1	90.00	939.2	1,533.3	1,078.5	1,045.6	32.85	32.835	CC, ES, SF
7,100.0	7,013.6	7,006.6	7,006.6	22.3	12.2	142.76	939.2	1,533.3	1,083.6	1,050.8	32.88	32.958	
7,200.0	7,110.8	7,103.8	7,103.8	22.4	12.4	169.93	939.2	1,533.3	1,105.2	1,072.9	32.25	34.270	
7,300.0	7,203.3	7,196.3	7,196.3	22.3	12.6	-179.99	939.2	1,533.3	1,142.8	1,111.9	30.91	36.974	
7,400.0	7,288.3	7,281.3	7,281.3	22.1	12.7	-174.19	939.2	1,533.3	1,195.2	1,166.3	28.95	41.282	
7,500.0	7,363.1	7,356.1	7,356.1	21.8	12.8	-169.44	939.2	1,533.3	1,261.0	1,234.4	26.57	47.455	
7,600.0	7,425.5	7,418.5	7,418.5	21.5	12.9	-164.13	939.2	1,533.3	1,338.2	1,314.1	24.12	55.480	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - CONNER 22-34 (EXISTING) - ENCANA WELL - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-Gyro

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,300.0	7,523.0	7,464.3	7,463.3	42.7	6.6	-90.08	-520.3	-2,243.4	1,357.1	1,309.4	47.72	28.438	
9,400.0	7,523.0	7,464.5	7,463.4	44.9	6.6	-90.09	-520.3	-2,243.4	1,282.6	1,232.6	50.01	25.648	
9,500.0	7,523.0	7,464.7	7,463.6	47.2	6.6	-90.10	-520.3	-2,243.4	1,211.8	1,159.5	52.31	23.164	
9,600.0	7,523.0	7,464.9	7,463.8	49.4	6.6	-90.12	-520.3	-2,243.4	1,145.3	1,090.7	54.63	20.965	
9,700.0	7,523.0	7,465.0	7,464.0	51.7	6.6	-90.13	-520.3	-2,243.4	1,084.0	1,027.1	56.96	19.032	
9,800.0	7,523.0	7,465.2	7,464.2	54.0	6.6	-90.14	-520.3	-2,243.4	1,028.8	969.5	59.30	17.350	
9,900.0	7,523.0	7,465.4	7,464.3	56.3	6.6	-90.15	-520.3	-2,243.4	980.7	919.1	61.65	15.909	
10,000.0	7,523.0	7,465.6	7,464.5	58.6	6.6	-90.16	-520.3	-2,243.4	940.8	876.8	64.00	14.700	
10,100.0	7,523.0	7,465.8	7,464.7	60.9	6.6	-90.18	-520.3	-2,243.4	910.2	843.8	66.36	13.715	
10,200.0	7,523.0	7,466.0	7,464.9	63.3	6.6	-90.19	-520.3	-2,243.4	889.8	821.1	68.73	12.946	
10,300.0	7,523.0	7,466.2	7,465.1	65.6	6.6	-90.20	-520.3	-2,243.4	880.4	809.3	71.11	12.382	
10,333.3	7,523.0	7,466.2	7,465.2	66.4	6.6	-90.21	-520.3	-2,243.4	879.8	807.9	71.90	12.237	CC, ES
10,400.0	7,523.0	7,466.4	7,465.3	68.0	6.6	-90.22	-520.3	-2,243.4	882.3	808.8	73.49	12.007	
10,500.0	7,523.0	7,466.6	7,465.5	70.3	6.6	-90.23	-520.3	-2,243.4	895.4	819.6	75.87	11.802	
10,600.0	7,523.0	7,466.8	7,465.7	72.7	6.6	-90.24	-520.3	-2,243.4	919.3	841.1	78.26	11.748	SF
10,700.0	7,523.0	7,467.0	7,465.9	75.0	6.6	-90.25	-520.3	-2,243.4	953.2	872.5	80.65	11.819	
10,800.0	7,523.0	7,467.2	7,466.1	77.4	6.6	-90.27	-520.3	-2,243.4	995.9	912.8	83.10	11.985	
10,900.0	7,523.0	7,467.4	7,466.3	79.8	6.6	-90.29	-520.3	-2,243.4	1,048.8	962.9	85.92	12.206	
11,000.0	7,523.0	7,467.6	7,466.6	82.2	6.6	-90.32	-520.3	-2,243.4	1,111.6	1,023.0	88.62	12.543	
11,100.0	7,523.0	7,467.9	7,466.8	84.7	6.6	-90.35	-520.3	-2,243.4	1,182.6	1,091.5	91.18	12.970	
11,200.0	7,523.0	7,468.2	7,467.1	87.1	6.6	-90.39	-520.3	-2,243.4	1,260.4	1,166.8	93.60	13.466	
11,300.0	7,523.0	7,468.5	7,467.4	89.5	6.6	-90.44	-520.3	-2,243.4	1,343.5	1,247.7	95.86	14.016	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - ERICA 1 (EXISTING) - GREAT WESTERN WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8118-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,700.0	7,523.0	7,440.0	7,440.0	51.7	13.0	90.00	345.2	-3,188.3	1,363.8	1,300.4	63.43	21.503	
9,800.0	7,523.0	7,440.0	7,440.0	54.0	13.0	90.00	345.2	-3,188.3	1,264.8	1,199.0	65.77	19.232	
9,900.0	7,523.0	7,440.0	7,440.0	56.3	13.0	90.00	345.2	-3,188.3	1,165.9	1,097.8	68.11	17.117	
10,000.0	7,523.0	7,440.0	7,440.0	58.6	13.0	90.00	345.2	-3,188.3	1,067.2	996.8	70.47	15.145	
10,100.0	7,523.0	7,440.0	7,440.0	60.9	13.0	90.00	345.2	-3,188.3	968.8	896.0	72.83	13.303	
10,200.0	7,523.0	7,440.0	7,440.0	63.3	13.0	90.00	345.2	-3,188.3	870.8	795.6	75.20	11.580	
10,300.0	7,523.0	7,440.0	7,440.0	65.6	13.0	90.00	345.2	-3,188.3	773.3	695.7	77.57	9.968	
10,400.0	7,523.0	7,440.0	7,440.0	68.0	13.0	90.00	345.2	-3,188.3	676.5	596.5	79.95	8.461	
10,500.0	7,523.0	7,440.0	7,440.0	70.3	13.0	90.00	345.2	-3,188.3	580.7	498.4	82.34	7.053	
10,600.0	7,523.0	7,440.0	7,440.0	72.7	13.0	90.00	345.2	-3,188.3	486.7	402.0	84.72	5.745	
10,700.0	7,523.0	7,440.0	7,440.0	75.0	13.0	90.00	345.2	-3,188.3	395.7	308.6	87.11	4.542	
10,800.0	7,523.0	7,440.0	7,440.0	77.4	13.0	90.00	345.2	-3,188.3	310.2	220.6	89.56	3.463	
10,900.0	7,523.0	7,440.0	7,440.0	79.8	13.0	90.00	345.2	-3,188.3	234.3	141.9	92.39	2.536	
11,000.0	7,523.0	7,440.0	7,440.0	82.2	13.0	90.00	345.2	-3,188.3	179.0	83.9	95.09	1.883	
11,073.2	7,523.0	7,440.0	7,440.0	84.0	13.0	90.00	345.2	-3,188.3	164.6	67.6	96.97	1.697	CC, ES, SF
11,100.0	7,523.0	7,440.0	7,440.0	84.7	13.0	90.00	345.2	-3,188.3	166.6	68.9	97.65	1.706	
11,200.0	7,523.0	7,440.0	7,440.0	87.1	13.0	90.00	345.2	-3,188.3	204.9	104.8	100.06	2.048	
11,300.0	7,523.0	7,440.0	7,440.0	89.5	13.0	90.00	345.2	-3,188.3	273.4	171.0	102.32	2.672	
11,400.0	7,523.0	7,440.0	7,440.0	92.0	13.0	90.00	345.2	-3,188.3	354.8	250.4	104.42	3.398	
11,500.0	7,523.0	7,440.0	7,440.0	94.4	13.0	90.00	345.2	-3,188.3	442.1	335.7	106.45	4.153	
11,600.0	7,523.0	7,440.0	7,440.0	96.8	13.0	90.00	345.2	-3,188.3	533.3	424.4	108.89	4.898	
11,638.3	7,523.0	7,440.0	7,440.0	97.7	13.0	90.00	345.2	-3,188.3	569.1	459.2	109.83	5.181	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - MCCONAHAY 1 (EXISTING) - ENCANA WELL - GYRO

Offset Site Error: 0.0 ft

Survey Program: 200-Gyro

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	-109.06	-189.4	-548.3	580.3				
100.0	100.0	86.0	86.0	0.1	0.0	-109.06	-189.4	-548.3	580.1	580.0	0.13	4,425.968	CC
200.0	200.0	183.1	183.1	0.3	0.1	-109.07	-189.7	-548.5	580.3	580.0	0.38	1,535.409	ES
300.0	300.0	280.3	280.2	0.5	0.2	-134.83	-190.1	-549.1	581.7	581.1	0.64	912.051	
400.0	400.0	380.2	380.2	0.7	0.2	-134.97	-190.3	-550.1	584.6	583.7	0.90	647.950	
500.0	499.9	483.1	483.1	0.8	0.3	-135.21	-190.1	-551.0	588.4	587.3	1.17	501.545	
600.0	599.7	579.7	579.7	1.0	0.4	-135.55	-190.1	-551.7	593.4	592.0	1.44	410.812	
700.0	699.4	683.0	683.0	1.3	0.5	-136.05	-190.4	-552.5	599.9	598.2	1.73	347.036	
800.0	798.9	778.4	778.3	1.5	0.6	-136.57	-190.4	-553.1	607.5	605.5	2.01	301.594	
900.0	898.3	876.6	876.6	1.7	0.7	-137.17	-190.2	-554.5	617.0	614.7	2.31	266.964	
1,000.0	997.4	978.0	978.0	2.0	0.8	-137.86	-190.0	-555.8	627.8	625.1	2.62	239.587	
1,100.0	1,096.3	1,077.0	1,076.9	2.3	0.9	-138.60	-189.6	-556.8	639.6	636.7	2.94	217.832	
1,200.0	1,195.0	1,172.6	1,172.5	2.6	0.9	-139.41	-189.4	-558.0	653.1	649.8	3.25	200.647	
1,300.0	1,293.6	1,270.0	1,269.9	3.0	1.0	-140.29	-189.7	-559.4	667.2	663.7	3.57	186.734	
1,400.0	1,392.2	1,369.8	1,369.8	3.3	1.1	-141.16	-189.9	-560.8	681.5	677.6	3.89	175.113	
1,500.0	1,490.8	1,469.6	1,469.5	3.6	1.2	-141.97	-189.9	-562.0	695.7	691.5	4.21	165.307	
1,600.0	1,589.4	1,566.4	1,566.3	3.9	1.3	-142.74	-190.0	-563.2	710.0	705.5	4.52	157.066	
1,700.0	1,688.0	1,663.5	1,663.4	4.3	1.4	-143.51	-190.5	-564.5	724.8	719.9	4.83	150.065	
1,800.0	1,786.6	1,763.6	1,763.5	4.6	1.5	-144.28	-191.0	-565.8	739.6	734.5	5.14	143.951	
1,900.0	1,885.3	1,863.2	1,863.1	4.9	1.5	-145.01	-191.5	-566.8	754.3	748.9	5.44	138.576	
2,000.0	1,983.9	1,959.8	1,959.6	5.3	1.6	-145.69	-191.9	-567.8	769.2	763.5	5.74	133.904	
2,100.0	2,082.5	2,058.2	2,058.1	5.6	1.7	-146.35	-192.4	-569.2	784.4	778.4	6.04	129.772	
2,200.0	2,181.1	2,156.7	2,156.6	5.9	1.8	-146.99	-192.9	-570.4	799.6	793.3	6.34	126.077	
2,300.0	2,279.7	2,254.0	2,253.8	6.3	1.9	-147.64	-193.8	-571.4	815.0	808.4	6.64	122.829	
2,400.0	2,378.3	2,354.3	2,354.1	6.6	2.0	-148.25	-194.4	-572.7	830.5	823.6	6.93	119.856	
2,500.0	2,476.9	2,457.5	2,457.3	6.9	2.1	-148.84	-194.6	-573.7	845.7	838.5	7.22	117.067	
2,600.0	2,575.6	2,555.4	2,555.2	7.3	2.2	-149.38	-194.6	-574.4	860.6	853.0	7.51	114.531	
2,700.0	2,674.2	2,652.5	2,652.3	7.6	2.2	-149.85	-194.2	-575.8	875.8	868.0	7.80	112.231	
2,800.0	2,772.8	2,751.1	2,750.9	8.0	2.3	-150.31	-193.7	-577.1	891.1	883.0	8.09	110.108	
2,900.0	2,871.4	2,848.7	2,848.5	8.3	2.4	-150.75	-193.3	-578.5	906.5	898.1	8.38	108.176	
3,000.0	2,970.0	2,946.0	2,945.8	8.6	2.5	-151.18	-193.0	-580.0	922.1	913.4	8.67	106.411	
3,100.0	3,068.6	3,045.1	3,044.9	9.0	2.6	-151.63	-193.1	-581.3	937.8	928.9	8.95	104.799	
3,200.0	3,167.2	3,145.1	3,144.9	9.3	2.7	-152.06	-193.0	-582.5	953.4	944.2	9.23	103.268	
3,300.0	3,265.8	3,242.5	3,242.3	9.6	2.8	-152.43	-192.5	-584.0	969.1	959.5	9.51	101.846	
3,400.0	3,364.5	3,344.1	3,343.8	10.0	2.9	-152.83	-192.2	-585.4	984.8	975.0	9.80	100.506	
3,500.0	3,463.1	3,447.0	3,446.7	10.3	2.9	-153.20	-191.3	-586.6	999.9	989.9	10.08	99.172	
3,600.0	3,561.7	3,543.9	3,543.6	10.6	3.0	-153.53	-190.3	-587.7	1,015.1	1,004.8	10.36	97.957	
3,700.0	3,660.3	3,641.1	3,640.8	11.0	3.1	-153.87	-189.8	-588.7	1,030.5	1,019.9	10.64	96.851	
3,800.0	3,758.9	3,742.8	3,742.5	11.3	3.2	-154.23	-189.3	-589.7	1,046.0	1,035.0	10.92	95.793	
3,900.0	3,857.5	3,844.3	3,844.0	11.7	3.3	-154.57	-188.5	-590.3	1,060.9	1,049.7	11.20	94.751	
4,000.0	3,956.1	3,942.4	3,942.1	12.0	3.4	-154.90	-187.8	-591.0	1,076.0	1,064.6	11.47	93.801	
4,100.0	4,054.8	4,044.1	4,043.8	12.3	3.5	-155.27	-187.6	-591.0	1,091.0	1,079.2	11.74	92.896	
4,200.0	4,153.4	4,144.6	4,144.3	12.7	3.5	-155.62	-187.0	-590.9	1,105.7	1,093.7	12.02	92.023	
4,300.0	4,252.0	4,243.0	4,242.7	13.0	3.6	-155.96	-186.7	-590.6	1,120.4	1,108.2	12.28	91.213	
4,400.0	4,350.6	4,339.2	4,338.9	13.4	3.7	-156.29	-186.5	-590.4	1,135.3	1,122.7	12.55	90.459	
4,500.0	4,449.2	4,436.0	4,435.7	13.7	3.8	-156.56	-185.5	-591.2	1,150.5	1,137.7	12.82	89.723	
4,600.0	4,547.8	4,536.5	4,536.2	14.0	3.9	-156.78	-183.8	-592.5	1,165.6	1,152.5	13.10	88.971	
4,700.0	4,646.4	4,635.3	4,635.0	14.4	4.0	-156.97	-181.7	-594.0	1,180.7	1,167.3	13.38	88.241	
4,800.0	4,745.0	4,734.8	4,734.4	14.7	4.1	-157.14	-179.4	-595.8	1,195.8	1,182.1	13.66	87.534	
4,900.0	4,843.7	4,835.5	4,835.1	15.0	4.2	-157.32	-177.0	-597.4	1,210.7	1,196.8	13.94	86.844	
5,000.0	4,942.3	4,934.0	4,933.5	15.4	4.2	-157.48	-174.6	-598.9	1,225.6	1,211.4	14.22	86.185	
5,100.0	5,040.9	5,034.9	5,034.4	15.7	4.3	-157.65	-172.3	-600.5	1,240.6	1,226.1	14.50	85.553	

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 McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - MCCONAHAY 1 (EXISTING) - ENCANA WELL - GYRO

Offset Site Error: 0.0 ft

Survey Program: 200-Gyro

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	5,139.5	5,148.0	5,147.4	16.1	4.4	-157.87	-169.6	-601.2	1,254.9	1,240.1	14.79	84.875	
5,300.0	5,238.1	5,254.6	5,254.0	16.4	4.5	-158.12	-167.2	-600.3	1,268.1	1,253.0	15.06	84.210	
5,400.0	5,336.7	5,350.2	5,349.6	16.7	4.6	-158.35	-165.1	-599.2	1,281.3	1,266.0	15.32	83.617	
5,500.0	5,435.3	5,444.8	5,444.1	17.1	4.7	-158.59	-163.5	-598.2	1,294.9	1,279.3	15.59	83.083	
5,600.0	5,534.0	5,541.8	5,541.1	17.4	4.8	-158.83	-162.2	-597.2	1,308.7	1,292.8	15.85	82.581	
5,700.0	5,632.6	5,641.5	5,640.8	17.7	4.9	-159.08	-160.9	-596.3	1,322.6	1,306.5	16.11	82.097	
5,800.0	5,731.2	5,740.2	5,739.5	18.1	4.9	-159.33	-159.6	-595.1	1,336.4	1,320.0	16.37	81.630	
5,900.0	5,829.8	5,835.7	5,835.0	18.4	5.0	-159.58	-158.8	-593.9	1,350.5	1,333.9	16.63	81.217	
6,000.0	5,928.4	5,935.5	5,934.8	18.8	5.1	-159.85	-158.2	-592.5	1,364.7	1,347.8	16.89	80.819	
6,100.0	6,027.0	6,036.6	6,035.9	19.1	5.2	-160.11	-157.4	-591.0	1,378.7	1,361.5	17.14	80.420	
6,200.0	6,125.6	6,134.2	6,133.4	19.4	5.3	-160.37	-156.7	-589.4	1,392.7	1,375.3	17.40	80.050	
6,300.0	6,224.3	6,232.3	6,231.5	19.8	5.4	-160.62	-156.2	-587.8	1,406.9	1,389.2	17.65	79.698	
7,500.0	7,363.1	7,351.9	7,351.1	21.8	6.3	-56.80	-158.0	-581.0	1,408.5	1,390.0	18.47	76.262	
7,600.0	7,425.5	7,413.5	7,412.7	21.5	6.4	-62.37	-157.9	-581.0	1,354.7	1,335.8	18.88	71.769	
7,700.0	7,473.6	7,460.1	7,459.2	21.2	6.4	-69.80	-157.9	-581.0	1,295.1	1,275.4	19.74	65.622	
7,800.0	7,506.0	7,491.4	7,490.6	21.0	6.5	-78.28	-157.9	-580.9	1,232.6	1,211.9	20.77	59.335	
7,900.0	7,521.6	7,507.1	7,506.2	20.9	6.5	-86.75	-158.0	-580.9	1,170.0	1,148.3	21.77	53.757	
8,000.0	7,523.0	7,508.5	7,507.7	21.0	6.5	-89.92	-158.0	-580.9	1,110.4	1,087.7	22.70	48.923	
8,100.0	7,523.0	7,508.5	7,507.7	21.4	6.5	-89.92	-158.0	-580.9	1,056.7	1,032.8	23.85	44.301	
8,200.0	7,523.0	7,508.5	7,507.6	22.1	6.5	-89.91	-158.0	-580.9	1,010.0	984.7	25.25	39.992	
8,300.0	7,523.0	7,508.4	7,507.6	23.3	6.5	-89.91	-158.0	-580.9	971.4	944.6	26.85	36.174	
8,400.0	7,523.0	7,508.4	7,507.6	24.7	6.5	-89.91	-158.0	-580.9	941.9	913.3	28.61	32.925	
8,500.0	7,523.0	7,508.4	7,507.5	26.3	6.5	-89.91	-158.0	-580.9	922.4	891.9	30.48	30.260	
8,600.0	7,523.0	7,508.3	7,507.5	28.1	6.5	-89.91	-158.0	-580.9	913.4	881.0	32.45	28.148	
8,632.2	7,523.0	7,508.3	7,507.5	28.8	6.5	-89.91	-158.0	-580.9	912.9	879.8	33.11	27.573	
8,700.0	7,523.0	7,508.3	7,507.5	30.1	6.5	-89.90	-158.0	-580.9	915.4	880.9	34.49	26.538	
8,800.0	7,523.0	7,508.3	7,507.4	32.0	6.5	-89.90	-158.0	-580.9	928.2	891.6	36.60	25.363	
8,900.0	7,523.0	7,508.3	7,507.4	34.1	6.5	-89.90	-158.0	-580.9	951.4	912.6	38.75	24.554	
9,000.0	7,523.0	7,508.2	7,507.4	36.2	6.5	-89.90	-158.0	-580.9	984.2	943.3	40.93	24.043	
9,100.0	7,523.0	7,508.2	7,507.4	38.3	6.5	-89.90	-158.0	-580.9	1,025.8	982.6	43.16	23.769	
9,200.0	7,523.0	7,508.2	7,507.3	40.5	6.5	-89.90	-158.0	-580.9	1,075.1	1,029.7	45.40	23.679	SF
9,300.0	7,523.0	7,508.2	7,507.3	42.7	6.5	-89.89	-158.0	-580.9	1,131.1	1,083.4	47.67	23.727	
9,400.0	7,523.0	7,508.1	7,507.3	44.9	6.5	-89.89	-158.0	-580.9	1,192.9	1,142.9	49.96	23.877	
9,500.0	7,523.0	7,508.1	7,507.3	47.2	6.5	-89.89	-158.0	-580.9	1,259.6	1,207.3	52.26	24.100	
9,600.0	7,523.0	7,508.1	7,507.2	49.4	6.5	-89.89	-158.0	-580.9	1,330.4	1,275.9	54.58	24.376	
9,700.0	7,523.0	7,508.0	7,507.2	51.7	6.5	-89.89	-158.0	-580.9	1,404.9	1,348.0	56.91	24.686	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - McConahay 1A-34H - Hz - Hz

Survey Program: 785-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
0.0	0.0	0.0	0.0	0.0	0.0	50.91	680.1	837.3	1,078.7				
100.0	100.0	97.0	97.0	0.1	0.2	50.91	680.1	837.3	1,078.7	1,078.4	0.30	3,624.555	
200.0	200.0	197.0	197.0	0.3	0.3	50.91	680.1	837.3	1,078.7	1,078.1	0.64	1,674.982	
300.0	300.0	297.0	297.0	0.5	0.5	25.26	680.1	837.3	1,077.9	1,076.9	0.99	1,088.250	
400.0	400.0	397.0	397.0	0.7	0.7	25.33	680.1	837.3	1,075.5	1,074.2	1.34	804.116	
500.0	499.9	496.9	496.9	0.8	0.9	25.44	680.1	837.3	1,071.6	1,069.9	1.69	635.685	
600.0	599.7	596.7	596.7	1.0	1.0	25.61	680.1	837.3	1,066.1	1,064.1	2.04	523.689	
700.0	699.4	696.4	696.4	1.3	1.2	25.82	680.1	837.3	1,059.0	1,056.6	2.39	443.432	
800.0	798.9	795.4	795.4	1.5	1.4	26.09	680.1	837.3	1,050.4	1,047.7	2.74	382.879	
900.0	898.3	889.9	889.9	1.7	1.5	26.36	680.7	837.2	1,040.5	1,037.4	3.10	335.887	
1,000.0	997.4	987.3	987.3	2.0	1.7	26.66	682.1	836.9	1,029.5	1,026.0	3.46	297.289	
1,100.0	1,096.3	1,089.9	1,089.9	2.3	1.9	27.03	683.5	836.5	1,016.8	1,012.9	3.84	264.516	
1,200.0	1,195.0	1,190.2	1,190.1	2.6	2.1	27.42	684.6	836.0	1,002.5	998.2	4.23	237.062	
1,300.0	1,293.6	1,291.2	1,291.2	3.0	2.2	27.81	685.5	835.4	987.8	983.2	4.62	213.771	
1,400.0	1,392.2	1,392.6	1,392.6	3.3	2.4	28.22	686.2	834.6	972.9	967.9	5.02	193.906	
1,500.0	1,490.8	1,493.2	1,493.1	3.6	2.6	28.62	687.0	833.4	957.8	952.4	5.42	176.868	
1,600.0	1,589.4	1,593.8	1,593.7	3.9	2.8	29.04	687.6	832.2	942.5	936.7	5.82	162.038	
1,700.0	1,688.0	1,695.1	1,695.1	4.3	2.9	29.47	688.0	830.8	927.1	920.9	6.22	148.985	
1,800.0	1,786.6	1,797.7	1,797.6	4.6	3.1	29.93	688.2	829.0	911.4	904.7	6.63	137.370	
1,900.0	1,885.3	1,896.4	1,896.3	4.9	3.3	30.40	688.0	827.2	895.4	888.3	7.04	127.140	
2,000.0	1,983.9	1,991.9	1,991.8	5.3	3.5	30.87	688.0	825.5	879.6	872.2	7.45	118.102	
2,100.0	2,082.5	2,090.7	2,090.5	5.6	3.6	31.38	688.1	824.1	864.2	856.3	7.86	109.905	
2,200.0	2,181.1	2,192.4	2,192.3	5.9	3.8	31.96	687.6	822.6	848.5	840.3	8.29	102.380	
2,300.0	2,279.7	2,289.5	2,289.4	6.3	4.0	32.54	686.9	821.2	832.8	824.1	8.71	95.621	
2,400.0	2,378.3	2,391.7	2,391.5	6.6	4.2	33.15	686.4	819.4	817.1	808.0	9.14	89.357	
2,500.0	2,476.9	2,488.1	2,487.9	6.9	4.3	33.72	686.1	817.5	801.4	791.8	9.57	83.713	
2,600.0	2,575.6	2,585.9	2,585.7	7.3	4.5	34.29	686.4	815.4	785.9	775.8	10.01	78.535	
2,700.0	2,674.2	2,678.0	2,677.7	7.6	4.7	34.80	687.4	813.4	770.9	760.4	10.43	73.893	
2,800.0	2,772.8	2,766.8	2,766.6	8.0	4.8	35.31	688.7	812.4	757.0	746.1	10.85	69.742	
2,900.0	2,871.4	2,857.4	2,857.2	8.3	5.0	35.90	690.1	812.7	744.4	733.1	11.29	65.953	
3,000.0	2,970.0	2,950.5	2,950.2	8.6	5.1	36.52	692.0	813.7	732.9	721.1	11.73	62.482	
3,100.0	3,068.6	3,051.3	3,051.0	9.0	5.3	37.23	694.1	815.2	721.8	709.6	12.19	59.189	
3,200.0	3,167.2	3,148.5	3,148.1	9.3	5.5	37.90	696.3	816.3	710.7	698.0	12.66	56.151	
3,300.0	3,265.8	3,247.6	3,247.2	9.6	5.7	38.61	698.8	817.6	699.8	686.7	13.13	53.311	
3,400.0	3,364.5	3,348.0	3,347.6	10.0	5.8	39.33	701.3	818.8	689.0	675.4	13.61	50.637	
3,500.0	3,463.1	3,444.0	3,443.5	10.3	6.0	40.03	703.9	819.9	678.3	664.3	14.08	48.177	
3,600.0	3,561.7	3,535.5	3,535.0	10.6	6.2	40.74	706.4	821.8	668.6	654.1	14.55	45.951	
3,700.0	3,660.3	3,638.0	3,637.4	11.0	6.4	41.69	708.0	824.8	659.4	644.3	15.06	43.785	
3,800.0	3,758.9	3,742.4	3,741.8	11.3	6.5	42.75	708.6	827.5	649.6	634.0	15.59	41.676	
3,900.0	3,857.5	3,847.5	3,846.8	11.7	6.7	43.81	709.3	829.1	639.1	623.0	16.12	39.644	
4,000.0	3,956.1	3,950.7	3,950.1	12.0	6.9	44.89	709.8	829.8	628.0	611.3	16.66	37.692	
4,100.0	4,054.8	4,049.7	4,049.1	12.3	7.1	45.90	710.6	830.0	616.7	599.5	17.19	35.870	
4,200.0	4,153.4	4,144.8	4,144.1	12.7	7.2	46.89	711.7	830.2	605.7	588.0	17.72	34.187	
4,300.0	4,252.0	4,236.6	4,236.0	13.0	7.4	47.95	712.3	831.7	596.1	577.9	18.25	32.666	
4,400.0	4,350.6	4,334.8	4,334.1	13.4	7.6	49.12	713.2	833.8	587.4	568.6	18.81	31.234	
4,500.0	4,449.2	4,437.1	4,436.4	13.7	7.7	50.31	714.6	835.6	578.6	559.3	19.38	29.860	
4,600.0	4,547.8	4,536.7	4,536.0	14.0	7.9	51.49	715.9	836.7	569.5	549.5	19.95	28.548	
4,700.0	4,646.4	4,635.7	4,635.0	14.4	8.1	52.72	717.2	838.2	561.0	540.5	20.53	27.331	
4,800.0	4,745.0	4,738.9	4,738.1	14.7	8.3	54.10	717.8	839.2	552.0	530.9	21.13	26.129	
4,900.0	4,843.7	4,838.1	4,837.3	15.0	8.4	55.51	717.9	839.8	543.0	521.2	21.73	24.988	
5,000.0	4,942.3	4,936.7	4,935.9	15.4	8.6	56.94	718.2	840.3	534.3	512.0	22.33	23.924	
5,100.0	5,040.9	5,034.9	5,034.2	15.7	8.8	58.37	718.8	840.9	526.0	503.0	22.94	22.928	

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 McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - McConahay 1A-34H - Hz - Hz

Offset Site Error: 0.0 ft

Survey Program: 785-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	5,139.5	5,132.9	5,132.1	16.1	9.0	59.85	719.4	841.6	518.2	494.6	23.55	21.999	
5,300.0	5,238.1	5,230.8	5,230.0	16.4	9.1	61.33	720.4	842.4	510.8	486.7	24.17	21.137	
5,400.0	5,336.7	5,314.4	5,313.5	16.7	9.3	62.56	721.8	844.1	505.1	480.3	24.74	20.419	
5,489.6	5,425.1	5,385.8	5,384.8	17.0	9.4	63.49	724.4	848.1	503.5	478.2	25.23	19.958	
5,500.0	5,435.3	5,394.5	5,393.5	17.1	9.4	63.59	724.7	848.8	503.5	478.2	25.28	19.913	
5,600.0	5,534.0	5,482.2	5,480.7	17.4	9.6	64.65	728.5	856.6	505.2	479.3	25.85	19.543	
5,700.0	5,632.6	5,568.9	5,566.9	17.7	9.8	65.77	731.6	866.3	509.4	482.9	26.42	19.280	
5,800.0	5,731.2	5,653.4	5,650.5	18.1	9.9	66.76	735.2	878.1	516.5	489.6	26.98	19.147	
5,900.0	5,829.8	5,742.6	5,738.3	18.4	10.1	67.70	739.5	892.7	526.3	498.8	27.54	19.109	
6,000.0	5,928.4	5,831.9	5,826.1	18.8	10.3	68.69	742.9	908.6	537.7	509.6	28.11	19.129	
6,100.0	6,027.0	5,909.2	5,901.6	19.1	10.5	69.43	746.5	924.8	552.4	523.8	28.64	19.289	
6,200.0	6,125.6	6,008.0	5,997.8	19.4	10.7	70.50	749.1	947.4	569.4	540.2	29.23	19.478	
6,300.0	6,224.3	6,108.3	6,095.5	19.8	11.0	71.50	752.1	969.8	586.0	556.2	29.83	19.646	
6,400.0	6,322.9	6,207.0	6,191.5	20.1	11.3	72.18	757.6	991.9	602.5	572.1	30.41	19.815	
6,500.0	6,421.5	6,305.7	6,287.4	20.5	11.5	72.77	763.6	1,014.5	619.4	588.4	30.98	19.994	
6,600.0	6,520.1	6,421.2	6,399.9	20.8	11.9	73.45	770.6	1,039.6	635.3	603.7	31.60	20.106	
6,700.0	6,618.7	6,849.6	6,819.5	21.1	12.3	82.03	755.4	1,004.0	623.4	590.3	33.11	18.829	
6,800.0	6,717.3	7,053.1	6,993.3	21.5	12.4	92.28	722.1	904.8	575.4	541.6	33.80	17.024	
6,900.0	6,815.9	7,238.3	7,125.2	21.8	12.8	107.81	678.9	783.1	523.1	489.2	33.86	15.449	
7,000.0	6,914.6	7,311.3	7,167.5	22.1	13.2	125.20	660.5	726.5	469.9	436.1	33.85	13.881	
7,100.0	7,013.6	7,381.7	7,204.6	22.3	13.8	-163.81	641.8	669.8	431.2	397.4	33.79	12.758	
7,200.0	7,110.8	7,444.8	7,235.0	22.4	14.4	-132.81	624.3	617.3	410.5	377.1	33.37	12.301	
7,266.3	7,172.8	7,491.9	7,256.0	22.3	14.9	-121.80	610.3	577.6	406.8	373.9	32.94	12.350	CC, ES
7,300.0	7,203.3	7,516.6	7,265.9	22.3	15.2	-117.15	602.5	556.4	407.7	375.0	32.76	12.446	
7,400.0	7,288.3	7,591.5	7,290.3	22.1	16.2	-104.98	577.5	490.2	419.2	386.9	32.28	12.988	
7,500.0	7,363.1	7,668.7	7,310.4	21.8	17.4	-94.66	550.4	420.7	440.8	408.6	32.19	13.693	
7,600.0	7,425.5	7,766.1	7,325.6	21.5	19.0	-84.71	517.6	330.3	465.5	432.7	32.81	14.189	
7,700.0	7,473.6	7,849.2	7,329.5	21.2	20.6	-77.39	491.9	251.4	489.4	455.7	33.73	14.510	
7,800.0	7,506.0	7,931.1	7,327.2	21.0	22.2	-71.93	466.9	173.5	511.4	476.4	34.97	14.621	
7,900.0	7,521.6	8,023.3	7,323.1	20.9	24.1	-68.62	437.7	86.1	528.6	491.7	36.87	14.337	
8,000.0	7,523.0	8,112.6	7,319.6	21.0	25.9	-68.07	407.9	2.1	540.6	501.2	39.34	13.741	
8,100.0	7,523.0	8,198.0	7,318.6	21.4	27.7	-68.43	376.6	-77.5	554.0	511.9	42.17	13.138	
8,200.0	7,523.0	8,284.8	7,319.3	22.1	29.6	-69.05	342.4	-157.3	569.7	524.3	45.35	12.563	
8,300.0	7,523.0	8,373.0	7,320.0	23.3	31.5	-69.71	306.2	-237.6	587.1	538.3	48.77	12.037	
8,400.0	7,523.0	8,452.5	7,320.6	24.7	33.2	-70.36	271.2	-309.0	607.5	555.3	52.19	11.641	
8,500.0	7,523.0	8,543.4	7,321.3	26.3	35.1	-71.10	229.7	-389.9	629.8	573.8	56.00	11.247	
8,600.0	7,523.0	8,632.2	7,320.8	28.1	37.1	-71.69	188.5	-468.5	653.3	593.5	59.84	10.919	
8,700.0	7,523.0	8,744.8	7,318.3	30.1	39.6	-72.22	136.9	-568.6	676.9	612.7	64.26	10.535	
8,800.0	7,523.0	8,852.5	7,315.6	32.0	42.0	-72.59	90.1	-665.5	698.1	629.5	68.63	10.172	
8,900.0	7,523.0	8,970.4	7,314.2	34.1	44.6	-73.05	40.4	-772.4	717.6	644.3	73.35	9.783	
9,000.0	7,523.0	9,092.5	7,314.9	36.2	47.4	-73.60	-8.4	-884.3	734.4	656.1	78.28	9.382	
9,100.0	7,523.0	9,237.3	7,318.1	38.3	50.8	-74.23	-59.4	-1,019.9	745.9	662.0	83.86	8.894	
9,200.0	7,523.0	9,353.6	7,320.4	40.5	53.5	-74.60	-95.1	-1,130.5	752.8	664.0	88.79	8.479	
9,300.0	7,523.0	9,459.9	7,321.3	42.7	56.0	-74.80	-126.2	-1,232.1	758.7	665.2	93.47	8.117	
9,400.0	7,523.0	9,565.9	7,320.7	44.9	58.5	-74.86	-156.2	-1,333.7	763.9	665.8	98.12	7.786	
9,500.0	7,523.0	9,679.5	7,318.9	47.2	61.2	-74.81	-186.5	-1,443.3	767.8	664.9	102.93	7.460	
9,600.0	7,523.0	9,799.6	7,316.5	49.4	64.0	-74.67	-215.8	-1,559.7	769.5	661.7	107.86	7.134	
9,700.0	7,523.0	9,908.3	7,314.7	51.7	66.6	-74.52	-240.0	-1,665.6	769.1	656.5	112.55	6.834	
9,800.0	7,523.0	10,019.1	7,314.7	54.0	69.2	-74.48	-264.0	-1,773.8	767.6	650.2	117.35	6.541	
9,900.0	7,523.0	10,133.6	7,314.7	56.3	72.0	-74.42	-287.2	-1,885.9	764.7	642.5	122.23	6.257	
10,000.0	7,523.0	10,270.5	7,316.1	58.6	75.2	-74.33	-310.1	-2,020.8	758.0	630.4	127.63	5.939	
10,100.0	7,523.0	10,409.6	7,315.4	60.9	78.5	-73.92	-325.5	-2,159.1	746.4	613.5	132.87	5.617	

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 McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - McConahay 1A-34H - Hz - Hz

Offset Site Error: 0.0 ft

Survey Program: 785-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,200.0	7,523.0	10,518.1	7,309.5	63.3	81.1	-73.06	-331.9	-2,267.2	731.1	594.1	137.05	5.335	
10,300.0	7,523.0	10,604.4	7,302.0	65.6	83.1	-72.12	-336.5	-2,353.0	716.5	575.9	140.60	5.096	
10,400.0	7,523.0	10,680.0	7,293.6	68.0	84.9	-71.15	-341.5	-2,428.0	704.3	560.5	143.80	4.898	
10,500.0	7,523.0	10,760.0	7,282.9	70.3	86.8	-70.01	-348.8	-2,507.0	695.4	548.5	146.87	4.735	
10,600.0	7,523.0	10,837.1	7,271.4	72.7	88.6	-68.86	-357.9	-2,582.6	690.0	540.3	149.76	4.607	
10,700.0	7,523.0	10,939.1	7,259.5	75.0	91.0	-67.70	-373.4	-2,682.7	686.9	533.8	153.09	4.487	
10,800.0	7,523.0	11,048.2	7,256.5	77.4	93.7	-67.26	-392.3	-2,790.1	682.4	525.1	157.31	4.338	
10,900.0	7,523.0	11,156.7	7,259.8	79.8	96.3	-67.45	-411.8	-2,896.8	678.8	516.5	162.29	4.183	
10,935.1	7,523.0	11,189.0	7,261.1	80.7	97.1	-67.57	-417.7	-2,928.5	678.5	514.6	163.91	4.140	
11,000.0	7,523.0	11,254.6	7,263.7	82.2	98.7	-67.84	-430.0	-2,992.9	679.6	512.6	166.98	4.070	
11,100.0	7,523.0	11,354.0	7,268.7	84.7	101.1	-68.39	-448.2	-3,090.5	683.9	512.3	171.60	3.985	
11,200.0	7,523.0	11,454.7	7,272.3	87.1	103.5	-68.94	-467.1	-3,189.3	693.3	517.4	175.94	3.941	
11,300.0	7,523.0	11,552.1	7,276.4	89.5	105.9	-69.57	-484.6	-3,285.1	705.9	526.0	179.96	3.923	SF
11,400.0	7,523.0	11,643.3	7,281.7	92.0	108.1	-70.34	-502.1	-3,374.4	723.6	539.9	183.62	3.940	
11,500.0	7,523.0	11,735.0	7,287.0	94.4	110.3	-71.21	-520.8	-3,463.9	746.5	559.2	187.34	3.985	
11,600.0	7,523.0	11,829.1	7,295.0	96.8	112.6	-72.46	-540.9	-3,555.6	771.2	578.2	193.03	3.995	
11,638.3	7,523.0	11,860.8	7,297.5	97.7	113.3	-72.85	-547.8	-3,586.4	781.0	586.0	195.02	4.005	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - McConahay 1C-34H-H266 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-10.9	0.0	10.9				
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-10.9	0.0	10.9	10.7	0.26	41.743	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-10.9	0.0	10.9	10.3	0.61	17.890	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	156.17	-10.9	0.0	11.7	10.8	0.96	12.209	
400.0	400.0	399.9	399.9	0.7	0.7	157.00	-11.2	0.8	14.3	13.0	1.31	10.931	
500.0	499.9	499.7	499.7	0.8	0.8	154.42	-11.9	3.4	18.9	17.3	1.67	11.369	
600.0	599.7	599.4	599.2	1.0	1.0	150.89	-13.0	7.5	25.6	23.6	2.03	12.628	
700.0	699.4	698.8	698.5	1.3	1.2	147.62	-14.6	13.4	34.5	32.1	2.41	14.321	
800.0	798.9	797.9	797.3	1.5	1.4	144.90	-16.7	20.8	45.6	42.8	2.81	16.236	
900.0	898.3	896.6	895.5	1.7	1.6	142.72	-19.2	29.9	58.8	55.6	3.23	18.238	
1,000.0	997.4	994.8	993.1	2.0	1.9	140.98	-22.1	40.6	74.3	70.6	3.67	20.245	
1,100.0	1,096.3	1,092.6	1,090.0	2.3	2.2	139.57	-25.5	52.8	92.0	87.8	4.14	22.203	
1,200.0	1,195.0	1,189.7	1,186.1	2.6	2.4	138.42	-29.2	66.5	111.7	107.0	4.64	24.061	
1,300.0	1,293.6	1,286.4	1,281.5	3.0	2.7	137.12	-33.4	81.7	132.5	127.3	5.17	25.645	
1,400.0	1,392.2	1,383.7	1,377.3	3.3	3.1	135.78	-38.0	98.1	154.0	148.3	5.70	26.998	
1,500.0	1,490.8	1,481.3	1,473.4	3.6	3.4	134.74	-42.5	114.7	175.6	169.3	6.25	28.104	
1,600.0	1,589.4	1,578.9	1,569.5	3.9	3.7	133.94	-47.1	131.2	197.2	190.4	6.80	29.023	
1,700.0	1,688.0	1,676.5	1,665.5	4.3	4.1	133.29	-51.6	147.8	218.9	211.5	7.35	29.796	
1,800.0	1,786.6	1,774.1	1,761.6	4.6	4.4	132.76	-56.2	164.3	240.6	232.7	7.90	30.455	
1,900.0	1,885.3	1,871.7	1,857.7	4.9	4.7	132.31	-60.8	180.9	262.3	253.8	8.46	31.022	
2,000.0	1,983.9	1,969.3	1,953.8	5.3	5.1	131.94	-65.3	197.4	284.0	275.0	9.01	31.516	
2,100.0	2,082.5	2,066.9	2,049.8	5.6	5.4	131.62	-69.9	214.0	305.8	296.2	9.57	31.948	
2,200.0	2,181.1	2,164.5	2,145.9	5.9	5.8	131.34	-74.4	230.5	327.5	317.4	10.13	32.331	
2,300.0	2,279.7	2,262.0	2,242.0	6.3	6.1	131.09	-79.0	247.1	349.2	338.6	10.69	32.671	
2,400.0	2,378.3	2,359.6	2,338.0	6.6	6.4	130.88	-83.6	263.6	371.0	359.7	11.25	32.976	
2,500.0	2,476.9	2,457.2	2,434.1	6.9	6.8	130.68	-88.1	280.2	392.8	380.9	11.81	33.250	
2,600.0	2,575.6	2,554.8	2,530.2	7.3	7.1	130.51	-92.7	296.7	414.5	402.1	12.37	33.498	
2,700.0	2,674.2	2,652.4	2,626.3	7.6	7.5	130.36	-97.2	313.3	436.3	423.3	12.94	33.723	
2,800.0	2,772.8	2,750.0	2,722.3	8.0	7.8	130.22	-101.8	329.8	458.1	444.6	13.50	33.929	
2,900.0	2,871.4	2,847.6	2,818.4	8.3	8.2	130.09	-106.4	346.4	479.8	465.8	14.06	34.118	
3,000.0	2,970.0	2,945.2	2,914.5	8.6	8.5	129.97	-110.9	363.0	501.6	487.0	14.63	34.291	
3,100.0	3,068.6	3,042.8	3,010.6	9.0	8.8	129.87	-115.5	379.5	523.4	508.2	15.19	34.451	
3,200.0	3,167.2	3,140.4	3,106.6	9.3	9.2	129.77	-120.0	396.1	545.1	529.4	15.76	34.599	
3,300.0	3,265.8	3,238.0	3,202.7	9.6	9.5	129.68	-124.6	412.6	566.9	550.6	16.32	34.736	
3,400.0	3,364.5	3,335.6	3,298.8	10.0	9.9	129.59	-129.2	429.2	588.7	571.8	16.89	34.864	
3,500.0	3,463.1	3,433.2	3,394.9	10.3	10.2	129.52	-133.7	445.7	610.5	593.0	17.45	34.983	
3,600.0	3,561.7	3,530.8	3,490.9	10.6	10.6	129.44	-138.3	462.3	632.3	614.2	18.02	35.094	
3,700.0	3,660.3	3,628.4	3,587.0	11.0	10.9	129.38	-142.8	478.8	654.0	635.5	18.58	35.199	
3,800.0	3,758.9	3,726.0	3,683.1	11.3	11.3	129.31	-147.4	495.4	675.8	656.7	19.15	35.297	
3,900.0	3,857.5	3,823.6	3,779.2	11.7	11.6	129.25	-152.0	511.9	697.6	677.9	19.71	35.389	
4,000.0	3,956.1	3,921.2	3,875.2	12.0	12.0	129.20	-156.5	528.5	719.4	699.1	20.28	35.476	
4,100.0	4,054.8	4,018.8	3,971.3	12.3	12.3	129.14	-161.1	545.0	741.2	720.3	20.84	35.557	
4,200.0	4,153.4	4,116.4	4,067.4	12.7	12.7	129.10	-165.6	561.6	763.0	741.6	21.41	35.635	
4,300.0	4,252.0	4,214.0	4,163.5	13.0	13.0	129.05	-170.2	578.1	784.7	762.8	21.98	35.708	
4,400.0	4,350.6	4,311.6	4,259.5	13.4	13.4	129.00	-174.8	594.7	806.5	784.0	22.54	35.778	
4,500.0	4,449.2	4,409.2	4,355.6	13.7	13.7	128.96	-179.3	611.3	828.3	805.2	23.11	35.844	
4,600.0	4,547.8	4,506.8	4,451.7	14.0	14.0	128.92	-183.9	627.8	850.1	826.4	23.68	35.907	
4,700.0	4,646.4	4,604.4	4,547.7	14.4	14.4	128.88	-188.5	644.4	871.9	847.7	24.24	35.966	
4,800.0	4,745.0	4,702.0	4,643.8	14.7	14.7	128.85	-193.0	660.9	893.7	868.9	24.81	36.023	
4,900.0	4,843.7	4,799.5	4,739.9	15.0	15.1	128.81	-197.6	677.5	915.5	890.1	25.38	36.078	
5,000.0	4,942.3	4,897.1	4,836.0	15.4	15.4	128.78	-202.1	694.0	937.3	911.3	25.94	36.129	
5,100.0	5,040.9	4,994.7	4,932.0	15.7	15.8	128.75	-206.7	710.6	959.0	932.5	26.51	36.179	

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 McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - McConahay 1C-34H-H266 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,139.5	5,092.3	5,028.1	16.1	16.1	128.72	-211.3	727.1	980.8	953.8	27.08	36.226	
5,300.0	5,238.1	5,189.9	5,124.2	16.4	16.5	128.69	-215.8	743.7	1,002.6	975.0	27.64	36.272	
5,400.0	5,336.7	5,287.5	5,220.3	16.7	16.8	128.67	-220.4	760.2	1,024.4	996.2	28.21	36.315	
5,500.0	5,435.3	5,385.1	5,316.3	17.1	17.2	128.64	-224.9	776.8	1,046.2	1,017.4	28.78	36.357	
5,600.0	5,534.0	5,482.7	5,412.4	17.4	17.5	128.61	-229.5	793.3	1,068.0	1,038.7	29.34	36.397	
5,700.0	5,632.6	5,580.3	5,508.5	17.7	17.9	128.59	-234.1	809.9	1,089.8	1,059.9	29.91	36.436	
5,800.0	5,731.2	5,677.9	5,604.6	18.1	18.2	128.57	-238.6	826.5	1,111.6	1,081.1	30.48	36.473	
5,900.0	5,829.8	5,775.5	5,700.6	18.4	18.6	128.54	-243.2	843.0	1,133.4	1,102.3	31.04	36.509	
6,000.0	5,928.4	5,873.1	5,796.7	18.8	18.9	128.52	-247.7	859.6	1,155.2	1,123.5	31.61	36.543	
6,100.0	6,027.0	5,970.7	5,892.8	19.1	19.3	128.50	-252.3	876.1	1,176.9	1,144.8	32.18	36.576	
6,200.0	6,125.6	6,068.3	5,988.9	19.4	19.6	128.48	-256.9	892.7	1,198.7	1,166.0	32.74	36.608	
6,300.0	6,224.3	6,165.9	6,084.9	19.8	20.0	128.46	-261.4	909.2	1,220.5	1,187.2	33.31	36.639	
6,400.0	6,322.9	6,263.5	6,181.0	20.1	20.3	128.45	-266.0	925.8	1,242.3	1,208.4	33.88	36.669	
6,500.0	6,421.5	6,361.1	6,277.1	20.5	20.7	128.43	-270.5	942.3	1,264.1	1,229.7	34.45	36.698	
6,600.0	6,520.1	6,458.7	6,373.2	20.8	21.0	128.41	-275.1	958.9	1,285.9	1,250.9	35.01	36.726	
6,700.0	6,618.7	6,556.3	6,469.2	21.1	21.3	128.39	-279.7	975.4	1,307.7	1,272.1	35.58	36.753	
6,800.0	6,717.3	6,653.9	6,565.3	21.5	21.7	128.38	-284.2	992.0	1,329.5	1,293.3	36.15	36.779	
6,900.0	6,815.9	6,751.5	6,661.4	21.8	22.0	128.36	-288.8	1,008.5	1,351.3	1,314.6	36.72	36.804	
7,000.0	6,914.6	6,849.0	6,757.4	22.1	22.4	138.96	-293.3	1,025.1	1,373.1	1,335.9	37.25	36.861	
7,100.0	7,013.6	6,949.1	6,855.9	22.3	22.7	-152.27	-298.0	1,042.0	1,397.4	1,359.9	37.49	37.272	
8,200.0	7,523.0	8,564.7	7,512.0	22.1	22.8	-89.55	-555.4	-127.9	1,407.1	1,365.8	41.28	34.083	
8,300.0	7,523.0	8,664.6	7,512.0	23.3	24.6	-89.55	-572.7	-226.2	1,401.1	1,356.5	44.66	31.375	
8,400.0	7,523.0	8,764.4	7,512.0	24.7	26.5	-89.55	-590.1	-324.5	1,395.2	1,346.9	48.29	28.889	
8,500.0	7,523.0	8,864.2	7,512.0	26.3	28.4	-89.55	-607.4	-422.9	1,389.2	1,337.1	52.14	26.645	
8,600.0	7,523.0	8,964.0	7,512.0	28.1	30.5	-89.54	-624.7	-521.2	1,383.3	1,327.1	56.15	24.637	
8,700.0	7,523.0	9,063.8	7,512.0	30.1	32.5	-89.54	-642.1	-619.5	1,377.3	1,317.1	60.29	22.847	
8,800.0	7,523.0	9,163.7	7,512.0	32.0	34.7	-89.54	-659.4	-717.8	1,371.4	1,306.9	64.53	21.252	
8,900.0	7,523.0	9,263.5	7,512.0	34.1	36.8	-89.54	-676.7	-816.1	1,365.4	1,296.6	68.86	19.829	
9,000.0	7,523.0	9,363.3	7,512.0	36.2	39.0	-89.54	-694.1	-914.4	1,359.5	1,286.2	73.26	18.556	
9,100.0	7,523.0	9,463.1	7,512.0	38.3	41.3	-89.53	-711.4	-1,012.7	1,353.5	1,275.8	77.72	17.415	
9,200.0	7,523.0	9,563.0	7,512.0	40.5	43.5	-89.53	-728.7	-1,111.0	1,347.6	1,265.4	82.23	16.387	
9,300.0	7,523.0	9,662.8	7,512.0	42.7	45.8	-89.53	-746.1	-1,209.3	1,341.7	1,254.9	86.78	15.460	
9,400.0	7,523.0	9,762.6	7,512.0	44.9	48.0	-89.53	-763.4	-1,307.6	1,335.7	1,244.3	91.37	14.619	
9,500.0	7,523.0	9,862.4	7,512.0	47.2	50.3	-89.53	-780.7	-1,405.9	1,329.8	1,233.8	95.99	13.854	
9,600.0	7,523.0	9,962.2	7,512.0	49.4	52.7	-89.52	-798.1	-1,504.2	1,323.8	1,223.2	100.63	13.156	
9,700.0	7,523.0	10,062.1	7,512.0	51.7	55.0	-89.52	-815.4	-1,602.5	1,317.9	1,212.6	105.29	12.517	
9,800.0	7,523.0	10,161.9	7,512.0	54.0	57.3	-89.52	-832.7	-1,700.8	1,311.9	1,201.9	109.97	11.929	
9,900.0	7,523.0	10,261.7	7,512.0	56.3	59.7	-89.52	-850.1	-1,799.1	1,306.0	1,191.3	114.67	11.389	
10,000.0	7,523.0	10,361.5	7,512.0	58.6	62.0	-89.51	-867.4	-1,897.5	1,300.0	1,180.6	119.39	10.889	
10,100.0	7,523.0	10,461.4	7,512.0	60.9	64.4	-89.51	-884.7	-1,995.8	1,294.1	1,170.0	124.12	10.426	
10,200.0	7,523.0	10,561.2	7,512.0	63.3	66.7	-89.51	-902.1	-2,094.1	1,288.1	1,159.3	128.86	9.996	
10,300.0	7,523.0	10,661.0	7,512.0	65.6	69.1	-89.51	-919.4	-2,192.4	1,282.2	1,148.6	133.61	9.596	
10,400.0	7,523.0	10,760.8	7,512.0	68.0	71.5	-89.51	-936.7	-2,290.7	1,276.2	1,137.9	138.37	9.223	
10,500.0	7,523.0	10,860.7	7,512.0	70.3	73.8	-89.50	-954.1	-2,389.0	1,270.3	1,127.1	143.14	8.874	
10,600.0	7,523.0	10,960.5	7,512.0	72.7	76.2	-89.50	-971.4	-2,487.3	1,264.3	1,116.4	147.92	8.548	
10,700.0	7,523.0	11,060.3	7,512.0	75.0	78.6	-89.50	-988.7	-2,585.6	1,258.4	1,105.7	152.70	8.241	
10,800.0	7,523.0	11,160.1	7,512.0	77.4	81.0	-89.50	-1,006.1	-2,683.9	1,252.5	1,094.9	157.54	7.950	
10,900.0	7,523.0	11,260.1	7,512.0	79.8	83.4	-89.50	-1,023.4	-2,782.3	1,249.3	1,086.7	162.57	7.684	
10,922.6	7,523.0	11,282.7	7,512.0	80.4	84.0	-89.50	-1,027.4	-2,804.6	1,249.1	1,085.5	163.67	7.632	
11,000.0	7,523.0	11,360.1	7,512.0	82.2	85.8	-89.50	-1,040.8	-2,880.8	1,250.5	1,083.1	167.33	7.473	
11,100.0	7,523.0	11,459.9	7,512.0	84.7	88.2	-89.50	-1,058.1	-2,979.1	1,256.1	1,084.3	171.78	7.312	
11,200.0	7,523.0	11,559.4	7,512.0	87.1	90.6	-89.50	-1,075.4	-3,077.1	1,266.2	1,090.3	175.90	7.198	

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 McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - McConahay 1C-34H-H266 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,300.0	7,523.0	11,658.3	7,512.0	89.5	93.0	-89.50	-1,092.6	-3,174.5	1,280.6	1,101.0	179.66	7.128	
11,400.0	7,523.0	11,756.5	7,512.0	92.0	95.4	-89.50	-1,109.6	-3,271.2	1,299.4	1,116.4	183.04	7.099	
11,500.0	7,523.0	11,853.8	7,512.0	94.4	97.7	-89.51	-1,126.5	-3,367.0	1,322.5	1,136.2	186.33	7.098	
11,600.0	7,523.0	11,950.7	7,512.0	96.8	100.1	-89.52	-1,143.4	-3,462.5	1,347.1	1,156.1	191.05	7.051	
11,638.3	7,523.0	11,987.9	7,512.0	97.7	101.0	-89.52	-1,149.8	-3,499.1	1,356.5	1,163.7	192.85	7.034	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - McConahay 1D-34H-H266 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	180.00	-21.9	0.0	21.9				
100.0	100.0	101.0	101.0	0.1	0.1	180.00	-21.9	0.0	21.9	21.6	0.26	82.934	
166.3	166.3	167.3	167.3	0.2	0.2	180.00	-21.9	0.0	21.9	21.4	0.50	44.148	CC
200.0	200.0	201.0	201.0	0.3	0.3	180.00	-21.9	0.0	21.9	21.2	0.61	35.678	ES
300.0	300.0	300.7	300.7	0.5	0.5	153.83	-22.5	0.6	23.3	22.4	0.96	24.247	
400.0	400.0	400.2	400.2	0.7	0.7	152.70	-24.5	2.3	27.7	26.4	1.31	21.082	
500.0	499.9	499.6	499.4	0.8	0.8	151.45	-27.8	5.1	34.9	33.3	1.67	20.948	SF
600.0	599.7	598.5	598.2	1.0	1.0	150.37	-32.4	9.0	45.1	43.1	2.03	22.230	
700.0	699.4	696.9	696.3	1.3	1.3	149.52	-38.2	14.0	58.2	55.8	2.40	24.256	
800.0	798.9	794.7	793.7	1.5	1.5	148.88	-45.3	20.1	74.1	71.3	2.78	26.689	
900.0	898.3	891.8	890.1	1.7	1.7	148.39	-53.5	27.2	92.9	89.7	3.16	29.341	
1,000.0	997.4	988.0	985.5	2.0	2.0	148.00	-62.9	35.2	114.4	110.9	3.57	32.097	
1,100.0	1,096.3	1,083.3	1,079.8	2.3	2.3	147.69	-73.4	44.3	138.8	134.8	3.98	34.886	
1,200.0	1,195.0	1,177.5	1,172.8	2.6	2.6	147.45	-85.0	54.2	165.7	161.3	4.41	37.624	
1,300.0	1,293.6	1,270.9	1,264.7	3.0	2.9	147.12	-97.6	65.0	194.2	189.4	4.84	40.089	
1,400.0	1,392.2	1,363.6	1,355.6	3.3	3.2	146.65	-111.2	76.7	224.0	218.7	5.29	42.319	
1,500.0	1,490.8	1,455.4	1,445.4	3.6	3.6	146.10	-125.8	89.2	255.0	249.3	5.75	44.365	
1,600.0	1,589.4	1,546.4	1,534.0	3.9	4.0	145.50	-141.3	102.5	287.4	281.2	6.21	46.266	
1,700.0	1,688.0	1,636.4	1,621.4	4.3	4.4	144.88	-157.8	116.7	321.0	314.3	6.68	48.052	
1,800.0	1,786.6	1,725.6	1,707.6	4.6	4.8	144.25	-175.1	131.5	355.9	348.8	7.16	49.746	
1,900.0	1,885.3	1,814.4	1,793.1	4.9	5.2	143.62	-193.3	147.1	392.1	384.5	7.63	51.362	
2,000.0	1,983.9	1,907.3	1,882.4	5.3	5.7	143.03	-212.8	163.9	428.8	420.7	8.13	52.773	
2,100.0	2,082.5	2,000.3	1,971.8	5.6	6.2	142.53	-232.3	180.6	465.6	457.0	8.62	54.023	
2,200.0	2,181.1	2,093.2	2,061.1	5.9	6.6	142.11	-251.7	197.3	502.3	493.2	9.11	55.136	
2,300.0	2,279.7	2,186.1	2,150.4	6.3	7.1	141.74	-271.2	214.0	539.1	529.5	9.60	56.133	
2,400.0	2,378.3	2,279.1	2,239.7	6.6	7.6	141.42	-290.7	230.7	575.9	565.8	10.10	57.032	
2,500.0	2,476.9	2,372.0	2,329.0	6.9	8.1	141.14	-310.2	247.5	612.8	602.2	10.59	57.847	
2,600.0	2,575.6	2,464.9	2,418.4	7.3	8.5	140.89	-329.7	264.2	649.6	638.5	11.09	58.588	
2,700.0	2,674.2	2,557.9	2,507.7	7.6	9.0	140.67	-349.1	280.9	686.4	674.9	11.58	59.265	
2,800.0	2,772.8	2,650.8	2,597.0	8.0	9.5	140.47	-368.6	297.6	723.3	711.2	12.08	59.886	
2,900.0	2,871.4	2,743.7	2,686.3	8.3	10.0	140.29	-388.1	314.3	760.1	747.6	12.57	60.457	
3,000.0	2,970.0	2,836.7	2,775.6	8.6	10.4	140.13	-407.6	331.0	797.0	783.9	13.07	60.985	
3,100.0	3,068.6	2,929.6	2,864.9	9.0	10.9	139.98	-427.1	347.8	833.9	820.3	13.56	61.473	
3,200.0	3,167.2	3,022.5	2,954.3	9.3	11.4	139.84	-446.5	364.5	870.7	856.7	14.06	61.926	
3,300.0	3,265.8	3,115.5	3,043.6	9.6	11.9	139.72	-466.0	381.2	907.6	893.1	14.56	62.349	
3,400.0	3,364.5	3,208.4	3,132.9	10.0	12.4	139.60	-485.5	397.9	944.5	929.4	15.05	62.742	
3,500.0	3,463.1	3,301.4	3,222.2	10.3	12.8	139.49	-505.0	414.6	981.4	965.8	15.55	63.111	
3,600.0	3,561.7	3,394.3	3,311.5	10.6	13.3	139.39	-524.5	431.4	1,018.3	1,002.2	16.05	63.456	
3,700.0	3,660.3	3,487.2	3,400.9	11.0	13.8	139.30	-544.0	448.1	1,055.1	1,038.6	16.54	63.780	
3,800.0	3,758.9	3,580.2	3,490.2	11.3	14.3	139.21	-563.4	464.8	1,092.0	1,075.0	17.04	64.085	
3,900.0	3,857.5	3,673.1	3,579.5	11.7	14.8	139.13	-582.9	481.5	1,128.9	1,111.4	17.54	64.373	
4,000.0	3,956.1	3,766.0	3,668.8	12.0	15.2	139.06	-602.4	498.2	1,165.8	1,147.8	18.03	64.645	
4,100.0	4,054.8	3,859.0	3,758.1	12.3	15.7	138.99	-621.9	515.0	1,202.7	1,184.2	18.53	64.901	
4,200.0	4,153.4	3,951.9	3,847.5	12.7	16.2	138.92	-641.4	531.7	1,239.6	1,220.6	19.03	65.145	
4,300.0	4,252.0	4,044.8	3,936.8	13.0	16.7	138.86	-660.8	548.4	1,276.5	1,257.0	19.53	65.375	
4,400.0	4,350.6	4,137.8	4,026.1	13.4	17.2	138.80	-680.3	565.1	1,313.4	1,293.4	20.02	65.594	
4,500.0	4,449.2	4,230.7	4,115.4	13.7	17.6	138.74	-699.8	581.8	1,350.3	1,329.8	20.52	65.803	
4,600.0	4,547.8	4,323.6	4,204.7	14.0	18.1	138.69	-719.3	598.5	1,387.2	1,366.2	21.02	66.001	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - MCCONAHAY 31-34 (EXISTING) - ENCANA WELL - GYROS

Offset Site Error: 0.0 ft

Survey Program: 100-Gyro

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	-54.26	645.2	-896.6	1,104.6				
100.0	100.0	100.9	100.9	0.1	0.1	-54.25	645.2	-896.3	1,104.4	1,104.2	0.20	5,527.044	
200.0	200.0	204.7	204.7	0.3	0.2	-54.22	645.3	-895.4	1,103.7	1,103.3	0.46	2,373.716	
300.0	300.0	309.7	309.7	0.5	0.3	-79.91	645.4	-894.0	1,102.5	1,101.8	0.73	1,504.872	
400.0	400.0	408.5	408.4	0.7	0.3	-80.01	645.4	-892.6	1,101.0	1,100.0	1.00	1,102.283	
500.0	499.9	527.1	527.0	0.8	0.4	-80.29	644.3	-890.5	1,098.2	1,097.0	1.29	851.386	
600.0	599.7	641.2	641.1	1.0	0.6	-80.72	641.6	-887.4	1,093.6	1,092.0	1.59	688.409	
700.0	699.4	742.2	742.0	1.3	0.6	-81.24	638.2	-884.4	1,088.0	1,086.1	1.89	575.504	
800.0	798.9	838.8	838.5	1.5	0.7	-81.82	635.3	-881.5	1,082.4	1,080.2	2.21	490.524	
900.0	898.3	935.0	934.6	1.7	0.8	-82.48	632.8	-878.7	1,077.0	1,074.4	2.54	423.560	
1,000.0	997.4	1,034.7	1,034.2	2.0	0.9	-83.24	630.5	-875.8	1,071.6	1,068.7	2.90	368.978	
1,100.0	1,096.3	1,132.1	1,131.6	2.3	1.0	-84.07	628.3	-872.7	1,066.0	1,062.7	3.29	324.191	
1,200.0	1,195.0	1,220.5	1,219.9	2.6	1.1	-84.91	626.3	-870.7	1,061.2	1,057.5	3.68	288.298	
1,300.0	1,293.6	1,320.3	1,319.7	3.0	1.2	-85.82	624.6	-868.5	1,057.1	1,053.0	4.09	258.481	
1,400.0	1,392.2	1,421.2	1,420.5	3.3	1.3	-86.71	623.3	-865.7	1,052.9	1,048.4	4.50	233.837	
1,500.0	1,490.8	1,516.6	1,515.9	3.6	1.4	-87.56	622.3	-863.1	1,049.1	1,044.2	4.91	213.507	
1,600.0	1,589.4	1,618.3	1,617.6	3.9	1.4	-88.47	621.2	-860.4	1,045.6	1,040.3	5.33	196.083	
1,700.0	1,688.0	1,720.8	1,720.0	4.3	1.5	-89.40	619.6	-857.4	1,041.9	1,036.2	5.75	181.103	
1,800.0	1,786.6	1,816.7	1,815.8	4.6	1.6	-90.28	618.2	-854.5	1,038.5	1,032.3	6.17	168.344	
1,900.0	1,885.3	1,911.6	1,910.7	4.9	1.7	-91.18	616.5	-852.2	1,035.7	1,029.1	6.58	157.300	
2,000.0	1,983.9	2,014.9	2,014.0	5.3	1.8	-92.16	614.7	-849.4	1,033.0	1,026.0	7.01	147.429	
2,100.0	2,082.5	2,106.7	2,105.7	5.6	1.9	-93.03	613.2	-847.1	1,030.7	1,023.3	7.42	138.933	
2,200.0	2,181.1	2,200.0	2,199.0	5.9	2.0	-93.91	612.0	-845.4	1,029.5	1,021.7	7.83	131.450	
2,300.0	2,279.7	2,293.1	2,292.1	6.3	2.1	-94.81	610.8	-844.1	1,029.1	1,020.8	8.24	124.826	
2,327.5	2,306.8	2,318.9	2,317.9	6.4	2.1	-95.06	610.4	-843.8	1,029.0	1,020.7	8.36	123.132	
2,400.0	2,378.3	2,386.3	2,385.3	6.6	2.1	-95.70	609.8	-843.2	1,029.2	1,020.6	8.65	118.924	
2,500.0	2,476.9	2,487.8	2,486.8	6.9	2.2	-96.63	609.3	-842.1	1,029.9	1,020.8	9.07	113.540	
2,600.0	2,575.6	2,587.4	2,586.4	7.3	2.3	-97.54	608.9	-840.8	1,030.5	1,021.0	9.48	108.667	
2,700.0	2,674.2	2,677.3	2,676.3	7.6	2.4	-98.35	608.9	-839.8	1,031.8	1,021.9	9.89	104.358	
2,800.0	2,772.8	2,775.1	2,774.0	8.0	2.5	-99.21	609.3	-839.2	1,033.9	1,023.6	10.29	100.430	
2,900.0	2,871.4	2,875.9	2,874.9	8.3	2.6	-100.09	609.7	-838.4	1,036.1	1,025.4	10.70	96.807	
3,000.0	2,970.0	2,975.0	2,973.9	8.6	2.6	-100.93	610.4	-837.5	1,038.4	1,027.3	11.11	93.487	
3,100.0	3,068.6	3,074.3	3,073.2	9.0	2.7	-101.77	611.2	-836.4	1,040.9	1,029.4	11.51	90.434	
3,200.0	3,167.2	3,171.7	3,170.6	9.3	2.8	-102.60	611.7	-835.5	1,043.6	1,031.7	11.91	87.635	
3,300.0	3,265.8	3,270.2	3,269.1	9.6	2.9	-103.44	612.1	-834.8	1,046.7	1,034.4	12.31	85.062	
3,400.0	3,364.5	3,365.3	3,364.2	10.0	3.0	-104.25	612.5	-834.1	1,050.2	1,037.5	12.70	82.706	
3,500.0	3,463.1	3,462.9	3,461.8	10.3	3.1	-105.07	613.2	-833.8	1,054.2	1,041.1	13.09	80.543	
3,600.0	3,561.7	3,558.8	3,557.7	10.6	3.1	-105.84	614.3	-833.3	1,058.5	1,045.0	13.48	78.541	
3,700.0	3,660.3	3,655.1	3,654.0	11.0	3.2	-106.63	614.9	-833.4	1,063.3	1,049.5	13.86	76.713	
3,800.0	3,758.9	3,753.6	3,752.5	11.3	3.3	-107.45	615.4	-833.6	1,068.5	1,054.2	14.24	75.013	
3,900.0	3,857.5	3,850.1	3,849.0	11.7	3.4	-108.24	616.0	-833.8	1,073.9	1,059.3	14.62	73.442	
4,000.0	3,956.1	3,948.0	3,946.9	12.0	3.5	-109.03	616.6	-834.2	1,079.8	1,064.8	15.00	71.992	
4,100.0	4,054.8	4,045.0	4,043.9	12.3	3.6	-109.78	617.6	-834.6	1,085.9	1,070.5	15.37	70.636	
4,200.0	4,153.4	4,143.2	4,142.1	12.7	3.6	-110.51	619.2	-835.2	1,092.5	1,076.7	15.75	69.385	
4,300.0	4,252.0	4,242.9	4,241.7	13.0	3.7	-111.19	621.7	-835.5	1,098.9	1,082.8	16.12	68.180	
4,400.0	4,350.6	4,339.1	4,337.9	13.4	3.8	-111.83	624.4	-836.1	1,105.9	1,089.4	16.49	67.076	
4,500.0	4,449.2	4,441.5	4,440.2	13.7	3.9	-112.47	627.7	-836.5	1,112.8	1,095.9	16.86	66.010	
4,600.0	4,547.8	4,538.4	4,537.1	14.0	4.0	-113.05	631.4	-836.7	1,119.8	1,102.5	17.23	65.004	
4,700.0	4,646.4	4,632.0	4,630.6	14.4	4.1	-113.56	635.8	-837.4	1,127.2	1,109.7	17.59	64.076	
4,800.0	4,745.0	4,727.0	4,725.5	14.7	4.1	-114.04	640.9	-838.4	1,135.3	1,117.3	17.96	63.209	
4,900.0	4,843.7	4,824.0	4,822.3	15.0	4.2	-114.56	645.3	-839.8	1,143.7	1,125.3	18.33	62.408	
5,000.0	4,942.3	4,923.3	4,921.5	15.4	4.3	-115.12	649.0	-841.2	1,152.2	1,133.5	18.69	61.658	

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 McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - MCCONAHAY 31-34 (EXISTING) - ENCANA WELL - GYROS

Offset Site Error: 0.0 ft

Survey Program: 100-Gyro

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	5,040.9	5,020.0	5,018.2	15.7	4.4	-115.67	652.6	-842.7	1,160.9	1,141.9	19.04	60.957	
5,200.0	5,139.5	5,113.9	5,112.0	16.1	4.5	-116.21	655.6	-844.4	1,170.1	1,150.7	19.40	60.320	
5,300.0	5,238.1	5,205.6	5,203.6	16.4	4.5	-116.75	658.1	-846.5	1,179.9	1,160.1	19.75	59.754	
5,400.0	5,336.7	5,302.1	5,300.1	16.7	4.6	-117.34	660.2	-849.2	1,190.2	1,170.1	20.09	59.239	
5,500.0	5,435.3	5,400.8	5,398.7	17.1	4.7	-117.94	662.3	-852.0	1,200.7	1,180.3	20.43	58.758	
5,600.0	5,534.0	5,503.7	5,501.5	17.4	4.8	-118.58	663.8	-854.7	1,211.2	1,190.4	20.77	58.303	
5,700.0	5,632.6	5,607.2	5,605.0	17.7	4.9	-119.23	665.0	-856.9	1,221.4	1,200.3	21.11	57.861	
5,800.0	5,731.2	5,706.0	5,703.8	18.1	5.0	-119.82	666.5	-859.0	1,231.6	1,210.2	21.44	57.435	
5,900.0	5,829.8	5,806.9	5,804.6	18.4	5.1	-120.43	667.7	-860.9	1,241.8	1,220.1	21.77	57.033	
6,000.0	5,928.4	5,900.0	5,897.7	18.8	5.1	-121.01	668.3	-862.7	1,252.4	1,230.3	22.10	56.676	
6,100.0	6,027.0	6,015.1	6,012.9	19.1	5.2	-121.73	668.7	-864.4	1,262.5	1,240.1	22.42	56.313	
6,200.0	6,125.6	6,114.0	6,111.7	19.4	5.3	-122.33	669.4	-865.3	1,272.2	1,249.4	22.74	55.948	
6,300.0	6,224.3	6,208.0	6,205.7	19.8	5.4	-122.89	669.9	-866.3	1,282.2	1,259.1	23.05	55.618	
6,400.0	6,322.9	6,309.2	6,306.9	20.1	5.5	-123.50	670.1	-867.4	1,292.4	1,269.0	23.36	55.313	
6,500.0	6,421.5	6,411.9	6,409.6	20.5	5.6	-124.13	670.1	-868.1	1,302.4	1,278.8	23.67	55.020	
6,600.0	6,520.1	6,505.4	6,503.1	20.8	5.7	-124.70	669.8	-868.8	1,312.7	1,288.7	23.97	54.755	
6,700.0	6,618.7	6,604.4	6,602.1	21.1	5.8	-125.31	669.1	-869.7	1,323.3	1,299.0	24.27	54.518	
6,800.0	6,717.3	6,706.4	6,704.1	21.5	5.8	-125.94	668.3	-870.4	1,333.9	1,309.3	24.57	54.294	
6,900.0	6,815.9	6,810.7	6,808.4	21.8	5.9	-126.58	667.1	-870.7	1,344.3	1,319.4	24.86	54.079	
7,000.0	6,914.6	6,916.3	6,913.9	22.1	6.0	-117.05	665.6	-870.3	1,353.9	1,328.8	25.13	53.881	
7,100.0	7,013.6	7,010.2	7,007.9	22.3	6.1	-50.77	664.1	-869.9	1,352.0	1,326.9	25.08	53.908	
7,200.0	7,110.8	7,110.5	7,108.1	22.4	6.2	-25.19	662.5	-869.6	1,333.0	1,308.4	24.60	54.175	
7,300.0	7,203.3	7,207.9	7,205.6	22.3	6.3	-17.05	661.0	-868.9	1,297.0	1,273.3	23.73	54.668	
7,400.0	7,288.3	7,292.1	7,289.7	22.1	6.4	-13.73	659.6	-868.2	1,245.4	1,222.9	22.48	55.391	
7,500.0	7,363.1	7,370.7	7,368.3	21.8	6.4	-12.56	658.6	-867.4	1,179.8	1,158.8	20.96	56.294	
7,600.0	7,425.5	7,432.7	7,430.3	21.5	6.5	-12.77	658.1	-866.7	1,102.0	1,082.7	19.28	57.158	
7,700.0	7,473.6	7,478.4	7,476.0	21.2	6.5	-14.67	657.7	-866.3	1,014.7	997.0	17.70	57.324	
7,800.0	7,506.0	7,508.6	7,506.2	21.0	6.5	-20.52	657.4	-866.0	920.4	903.6	16.79	54.821	
7,900.0	7,521.6	7,522.6	7,520.2	20.9	6.6	-48.00	657.3	-865.9	822.1	802.9	19.20	42.824	
8,000.0	7,523.0	7,523.6	7,521.2	21.0	6.6	-92.32	657.3	-865.9	722.3	699.5	22.81	31.668	
8,100.0	7,523.0	7,523.2	7,520.8	21.4	6.6	-91.94	657.3	-865.9	622.7	598.7	23.96	25.989	
8,200.0	7,523.0	7,522.9	7,520.5	22.1	6.6	-91.55	657.3	-865.9	523.1	497.7	25.36	20.631	
8,300.0	7,523.0	7,522.5	7,520.1	23.3	6.6	-91.16	657.3	-865.9	423.8	396.8	26.95	15.724	
8,400.0	7,523.0	7,522.1	7,519.7	24.7	6.6	-90.76	657.3	-865.9	324.8	296.1	28.70	11.318	
8,500.0	7,523.0	7,521.7	7,519.3	26.3	6.6	-90.35	657.3	-865.9	226.8	196.2	30.57	7.419	
8,600.0	7,523.0	7,521.3	7,518.9	28.1	6.6	-89.93	657.3	-866.0	131.8	99.3	32.53	4.051	
8,700.0	7,523.0	7,520.9	7,518.5	30.1	6.6	-89.51	657.3	-866.0	57.5	22.9	34.57	1.662	
8,720.3	7,523.0	7,520.9	7,518.5	30.5	6.6	-89.42	657.3	-866.0	53.7	18.7	35.00	1.536	CC, ES, SF
8,800.0	7,523.0	7,520.5	7,518.1	32.0	6.5	-89.08	657.3	-866.0	96.1	59.4	36.67	2.621	
8,900.0	7,523.0	7,520.1	7,517.7	34.1	6.5	-88.63	657.3	-866.0	187.5	148.7	38.81	4.832	
9,000.0	7,523.0	7,519.7	7,517.3	36.2	6.5	-88.18	657.3	-866.0	284.8	243.8	40.99	6.948	
9,100.0	7,523.0	7,519.3	7,516.9	38.3	6.5	-87.73	657.3	-866.0	383.4	340.2	43.20	8.877	
9,200.0	7,523.0	7,518.8	7,516.4	40.5	6.5	-87.26	657.3	-866.0	482.7	437.2	45.43	10.625	
9,300.0	7,523.0	7,518.4	7,516.0	42.7	6.5	-86.78	657.3	-866.0	582.1	534.5	47.68	12.210	
9,400.0	7,523.0	7,517.9	7,515.5	44.9	6.5	-86.30	657.3	-866.0	681.8	631.8	49.94	13.652	
9,500.0	7,523.0	7,517.5	7,515.1	47.2	6.5	-85.80	657.3	-866.0	781.5	729.3	52.21	14.968	
9,600.0	7,523.0	7,517.0	7,514.6	49.4	6.5	-85.29	657.3	-866.0	881.3	826.8	54.49	16.174	
9,700.0	7,523.0	7,516.5	7,514.1	51.7	6.5	-84.78	657.4	-866.0	981.1	924.3	56.77	17.281	
9,800.0	7,523.0	7,516.0	7,513.6	54.0	6.5	-84.25	657.4	-866.0	1,081.0	1,021.9	59.06	18.303	
9,900.0	7,523.0	7,515.5	7,513.1	56.3	6.5	-83.72	657.4	-866.0	1,180.9	1,119.5	61.34	19.250	
10,000.0	7,523.0	7,515.0	7,512.6	58.6	6.5	-83.17	657.4	-866.0	1,280.8	1,217.1	63.63	20.129	
10,100.0	7,523.0	7,514.4	7,512.0	60.9	6.5	-82.61	657.4	-866.0	1,380.7	1,314.8	65.91	20.950	

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 McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - MCCONAHAY 31-34 (EXISTING) MRP - MACHII-ROSS WELL - NO SU

Offset Site Error: 0.0 ft

Survey Program: 4861-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-50.60	753.3	-917.3	1,188.1				
100.0	100.0	48.0	48.0	0.1	0.1	-50.60	753.3	-917.3	1,187.0	1,186.8	0.21	5,524.092	
200.0	200.0	148.0	148.0	0.3	0.3	-50.60	753.3	-917.3	1,187.0	1,186.4	0.56	2,104.819	
300.0	300.0	248.0	248.0	0.5	0.4	-76.32	753.3	-917.3	1,186.8	1,185.9	0.91	1,298.590	
400.0	400.0	348.0	348.0	0.7	0.6	-76.45	753.3	-917.3	1,186.2	1,184.9	1.27	935.481	
500.0	499.9	447.9	447.9	0.8	0.8	-76.67	753.3	-917.3	1,185.1	1,183.5	1.63	727.225	
600.0	599.7	547.7	547.7	1.0	1.0	-76.97	753.3	-917.3	1,183.7	1,181.7	2.00	591.153	
700.0	699.4	647.4	647.4	1.3	1.1	-77.36	753.3	-917.3	1,182.0	1,179.6	2.39	494.679	
800.0	798.9	746.9	746.9	1.5	1.3	-77.83	753.3	-917.3	1,179.9	1,177.1	2.79	422.382	
900.0	898.3	846.3	846.3	1.7	1.5	-78.39	753.3	-917.3	1,177.6	1,174.4	3.22	366.022	
1,000.0	997.4	945.4	945.4	2.0	1.7	-79.03	753.3	-917.3	1,175.0	1,171.3	3.66	320.792	
1,100.0	1,096.3	1,044.3	1,044.3	2.3	1.8	-79.76	753.3	-917.3	1,172.3	1,168.1	4.13	283.693	
1,200.0	1,195.0	1,143.0	1,143.0	2.6	2.0	-80.55	753.3	-917.3	1,169.4	1,164.8	4.62	253.211	
1,300.0	1,293.6	1,241.6	1,241.6	3.0	2.2	-81.34	753.3	-917.3	1,166.8	1,161.7	5.11	228.303	
1,400.0	1,392.2	1,340.2	1,340.2	3.3	2.3	-82.14	753.3	-917.3	1,164.4	1,158.8	5.61	207.650	
1,500.0	1,490.8	1,438.8	1,438.8	3.6	2.5	-82.94	753.3	-917.3	1,162.2	1,156.1	6.11	190.292	
1,600.0	1,589.4	1,537.4	1,537.4	3.9	2.7	-83.74	753.3	-917.3	1,160.2	1,153.6	6.61	175.531	
1,700.0	1,688.0	1,636.0	1,636.0	4.3	2.9	-84.55	753.3	-917.3	1,158.5	1,151.4	7.11	162.844	
1,800.0	1,786.6	1,734.6	1,734.6	4.6	3.0	-85.35	753.3	-917.3	1,157.0	1,149.4	7.62	151.840	
1,900.0	1,885.3	1,833.3	1,833.3	4.9	3.2	-86.16	753.3	-917.3	1,155.8	1,147.7	8.13	142.217	
2,000.0	1,983.9	1,931.9	1,931.9	5.3	3.4	-86.97	753.3	-917.3	1,154.8	1,146.1	8.63	133.740	
2,100.0	2,082.5	2,030.5	2,030.5	5.6	3.5	-87.78	753.3	-917.3	1,154.0	1,144.9	9.14	126.225	
2,200.0	2,181.1	2,129.1	2,129.1	5.9	3.7	-88.60	753.3	-917.3	1,153.5	1,143.8	9.65	119.524	
2,300.0	2,279.7	2,227.7	2,227.7	6.3	3.9	-89.41	753.3	-917.3	1,153.2	1,143.0	10.16	113.518	
2,372.8	2,351.5	2,299.5	2,299.5	6.5	4.0	-90.00	753.3	-917.3	1,153.1	1,142.6	10.53	109.525	CC
2,400.0	2,378.3	2,326.3	2,326.3	6.6	4.1	-90.22	753.3	-917.3	1,153.1	1,142.5	10.67	108.109	
2,500.0	2,476.9	2,424.9	2,424.9	6.9	4.2	-91.03	753.3	-917.3	1,153.3	1,142.1	11.17	103.218	
2,600.0	2,575.6	2,523.6	2,523.6	7.3	4.4	-91.85	753.3	-917.3	1,153.7	1,142.1	11.68	98.779	ES
2,700.0	2,674.2	2,622.2	2,622.2	7.6	4.6	-92.66	753.3	-917.3	1,154.4	1,142.2	12.19	94.735	
2,800.0	2,772.8	2,720.8	2,720.8	8.0	4.7	-93.47	753.3	-917.3	1,155.3	1,142.6	12.69	91.039	
2,900.0	2,871.4	2,819.4	2,819.4	8.3	4.9	-94.28	753.3	-917.3	1,156.4	1,143.2	13.19	87.653	
3,000.0	2,970.0	2,918.0	2,918.0	8.6	5.1	-95.09	753.3	-917.3	1,157.8	1,144.1	13.70	84.541	
3,100.0	3,068.6	3,016.6	3,016.6	9.0	5.3	-95.89	753.3	-917.3	1,159.4	1,145.2	14.20	81.675	
3,200.0	3,167.2	3,115.2	3,115.2	9.3	5.4	-96.70	753.3	-917.3	1,161.3	1,146.6	14.69	79.029	
3,300.0	3,265.8	3,213.8	3,213.8	9.6	5.6	-97.50	753.3	-917.3	1,163.3	1,148.2	15.19	76.582	
3,400.0	3,364.5	3,312.5	3,312.5	10.0	5.8	-98.29	753.3	-917.3	1,165.7	1,150.0	15.69	74.314	
3,500.0	3,463.1	3,411.1	3,411.1	10.3	6.0	-99.09	753.3	-917.3	1,168.2	1,152.0	16.18	72.208	
3,600.0	3,561.7	3,509.7	3,509.7	10.6	6.1	-99.88	753.3	-917.3	1,171.0	1,154.3	16.67	70.250	
3,700.0	3,660.3	3,608.3	3,608.3	11.0	6.3	-100.67	753.3	-917.3	1,174.0	1,156.8	17.16	68.426	
3,800.0	3,758.9	3,706.9	3,706.9	11.3	6.5	-101.45	753.3	-917.3	1,177.2	1,159.5	17.64	66.725	
3,900.0	3,857.5	3,805.5	3,805.5	11.7	6.6	-102.23	753.3	-917.3	1,180.6	1,162.5	18.13	65.137	
4,000.0	3,956.1	3,904.1	3,904.1	12.0	6.8	-103.00	753.3	-917.3	1,184.3	1,165.7	18.61	63.652	
4,100.0	4,054.8	4,002.8	4,002.8	12.3	7.0	-103.77	753.3	-917.3	1,188.2	1,169.1	19.08	62.262	
4,200.0	4,153.4	4,101.4	4,101.4	12.7	7.2	-104.54	753.3	-917.3	1,192.3	1,172.8	19.56	60.960	
4,300.0	4,252.0	4,200.0	4,200.0	13.0	7.3	-105.30	753.3	-917.3	1,196.6	1,176.6	20.03	59.739	
4,400.0	4,350.6	4,298.6	4,298.6	13.4	7.5	-106.05	753.3	-917.3	1,201.2	1,180.7	20.50	58.593	
4,500.0	4,449.2	4,397.2	4,397.2	13.7	7.7	-106.80	753.3	-917.3	1,205.9	1,185.0	20.97	57.516	
4,600.0	4,547.8	4,495.8	4,495.8	14.0	7.8	-107.54	753.3	-917.3	1,210.9	1,189.5	21.43	56.504	
4,700.0	4,646.4	4,594.4	4,594.4	14.4	8.0	-108.28	753.3	-917.3	1,216.1	1,194.2	21.89	55.552	
4,800.0	4,745.0	4,693.0	4,693.0	14.7	8.2	-109.01	753.3	-917.3	1,221.4	1,199.1	22.35	54.656	
4,900.0	4,843.7	4,791.7	4,791.7	15.0	8.4	-109.73	753.3	-917.3	1,227.0	1,204.2	22.80	53.812	
5,000.0	4,942.3	4,861.0	4,861.0	15.4	8.5	-110.23	753.3	-917.3	1,233.1	1,209.9	23.22	53.117	

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 McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - MCCONAHAY 31-34 (EXISTING) MRP - MACHII-ROSS WELL - NO SU

Offset Site Error: 0.0 ft

Survey Program: 4861-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,040.9	4,861.0	4,861.0	15.7	8.5	-110.23	753.3	-917.3	1,245.3	1,221.8	23.54	52.907	SF
5,200.0	5,139.5	4,861.0	4,861.0	16.1	8.5	-110.23	753.3	-917.3	1,265.3	1,241.5	23.86	53.029	
5,300.0	5,238.1	4,861.0	4,861.0	16.4	8.5	-110.23	753.3	-917.3	1,292.8	1,268.6	24.18	53.456	
5,400.0	5,336.7	4,861.0	4,861.0	16.7	8.5	-110.23	753.3	-917.3	1,327.2	1,302.7	24.51	54.157	
5,500.0	5,435.3	4,861.0	4,861.0	17.1	8.5	-110.23	753.3	-917.3	1,368.1	1,343.3	24.83	55.099	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - MCCONAHAY 41-34 (EXISTING) - ENCANA WELL - GYRO

Offset Site Error: 0.0 ft

Survey Program: 200-Gyro

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	29.78	775.9	444.0	894.0				
100.0	100.0	86.0	86.0	0.1	0.0	29.78	775.9	444.0	893.9	893.8	0.13	6,820.197	
200.0	200.0	191.7	191.7	0.3	0.1	29.81	775.4	444.3	893.7	893.3	0.39	2,315.830	
300.0	300.0	287.3	287.2	0.5	0.2	4.26	774.0	445.8	892.3	891.7	0.65	1,379.361	
400.0	400.0	390.2	390.1	0.7	0.3	4.49	772.2	448.4	889.5	888.6	0.92	971.173	
500.0	499.9	493.5	493.3	0.8	0.4	4.73	769.9	451.0	884.5	883.3	1.18	746.657	
600.0	599.7	593.8	593.6	1.0	0.4	4.96	767.7	453.0	877.5	876.1	1.45	605.212	
700.0	699.4	700.0	699.8	1.3	0.5	5.17	765.2	454.2	868.3	866.6	1.72	505.318	
800.0	798.9	793.2	793.0	1.5	0.6	5.35	763.2	455.0	857.3	855.4	1.98	433.767	
900.0	898.3	894.0	893.7	1.7	0.7	5.54	761.5	455.9	845.1	842.8	2.24	377.433	
1,000.0	997.4	998.9	998.6	2.0	0.8	5.72	759.6	456.0	830.6	828.1	2.51	331.319	
1,100.0	1,096.3	1,092.9	1,092.6	2.3	0.9	5.93	757.8	456.3	814.4	811.6	2.77	294.495	
1,200.0	1,195.0	1,191.6	1,191.3	2.6	1.0	6.15	756.0	456.7	796.9	793.9	3.03	263.018	
1,300.0	1,293.6	1,292.0	1,291.7	3.0	1.1	6.40	754.0	457.3	779.0	775.7	3.30	236.248	
1,400.0	1,392.2	1,389.3	1,389.0	3.3	1.2	6.66	751.9	457.9	761.1	757.5	3.56	213.607	
1,500.0	1,490.8	1,485.6	1,485.2	3.6	1.2	6.94	750.0	458.6	743.3	739.5	3.83	194.178	
1,600.0	1,589.4	1,585.5	1,585.1	3.9	1.3	7.23	748.1	459.3	725.7	721.6	4.10	177.137	
1,700.0	1,688.0	1,680.7	1,680.3	4.3	1.4	7.50	746.5	459.8	708.1	703.7	4.36	162.346	
1,800.0	1,786.6	1,782.3	1,781.9	4.6	1.5	7.80	744.8	460.5	690.6	686.0	4.63	149.066	
1,900.0	1,885.3	1,879.0	1,878.6	4.9	1.6	8.11	743.0	460.9	672.9	668.0	4.90	137.308	
2,000.0	1,983.9	1,979.0	1,978.6	5.3	1.7	8.43	741.4	461.4	655.4	650.2	5.17	126.705	
2,100.0	2,082.5	2,076.7	2,076.2	5.6	1.8	8.75	739.7	461.6	637.6	632.2	5.44	117.168	
2,200.0	2,181.1	2,172.1	2,171.6	5.9	1.8	9.05	738.4	461.7	620.2	614.5	5.71	108.619	
2,300.0	2,279.7	2,271.6	2,271.1	6.3	1.9	9.37	737.5	461.8	603.2	597.2	5.98	100.819	
2,400.0	2,378.3	2,366.8	2,366.3	6.6	2.0	9.61	736.9	461.4	586.1	579.8	6.25	93.769	
2,500.0	2,476.9	2,462.5	2,462.0	6.9	2.1	9.80	737.4	460.7	569.7	563.2	6.52	87.422	
2,600.0	2,575.6	2,558.6	2,558.1	7.3	2.2	9.95	738.4	459.8	553.7	546.9	6.78	81.631	
2,700.0	2,674.2	2,653.8	2,653.3	7.6	2.3	10.05	740.2	458.9	538.3	531.2	7.05	76.377	
2,800.0	2,772.8	2,750.5	2,749.9	8.0	2.3	10.13	742.6	458.1	523.5	516.1	7.31	71.575	
2,900.0	2,871.4	2,850.9	2,850.3	8.3	2.4	10.25	745.1	457.5	508.7	501.2	7.58	67.077	
3,000.0	2,970.0	2,949.7	2,949.1	8.6	2.5	10.43	746.9	457.1	493.6	485.8	7.86	62.828	
3,100.0	3,068.6	3,046.1	3,045.5	9.0	2.6	10.60	749.1	456.8	479.0	470.8	8.13	58.934	
3,200.0	3,167.2	3,144.5	3,143.8	9.3	2.7	10.80	751.5	457.0	464.7	456.3	8.40	55.308	
3,300.0	3,265.8	3,243.5	3,242.8	9.6	2.8	11.08	753.6	457.4	450.3	441.6	8.68	51.883	
3,400.0	3,364.5	3,341.8	3,341.1	10.0	2.8	11.44	755.5	458.3	436.1	427.2	8.96	48.664	
3,500.0	3,463.1	3,439.9	3,439.2	10.3	2.9	11.86	757.3	459.4	422.0	412.8	9.25	45.639	
3,600.0	3,561.7	3,538.4	3,537.6	10.6	3.0	12.33	759.3	460.9	408.3	398.7	9.54	42.807	
3,700.0	3,660.3	3,638.0	3,637.2	11.0	3.1	12.85	761.2	462.3	394.4	384.6	9.83	40.112	
3,800.0	3,758.9	3,736.5	3,735.6	11.3	3.2	13.29	763.4	463.2	380.5	370.4	10.12	37.583	
3,900.0	3,857.5	3,834.8	3,834.0	11.7	3.3	13.79	765.8	464.3	366.9	356.5	10.42	35.206	
4,000.0	3,956.1	3,934.6	3,933.7	12.0	3.4	14.38	767.9	465.6	353.3	342.6	10.73	32.930	
4,100.0	4,054.8	4,034.1	4,033.2	12.3	3.4	15.11	769.5	467.2	339.5	328.4	11.05	30.730	
4,200.0	4,153.4	4,133.3	4,132.3	12.7	3.5	15.94	771.0	469.0	325.7	314.3	11.38	28.631	
4,300.0	4,252.0	4,233.1	4,232.1	13.0	3.6	16.71	772.7	470.0	311.7	300.0	11.71	26.632	
4,400.0	4,350.6	4,332.3	4,331.3	13.4	3.7	17.36	775.0	470.2	297.7	285.6	12.03	24.742	
4,500.0	4,449.2	4,431.0	4,430.0	13.7	3.8	17.95	777.7	469.9	283.6	271.2	12.36	22.953	
4,600.0	4,547.8	4,529.6	4,528.5	14.0	3.9	18.55	780.6	469.6	269.7	257.1	12.68	21.267	
4,700.0	4,646.4	4,628.3	4,627.2	14.4	4.0	19.17	783.7	469.2	255.9	242.9	13.02	19.656	
4,800.0	4,745.0	4,725.4	4,724.2	14.7	4.0	19.88	787.0	469.2	242.7	229.3	13.36	18.160	
4,900.0	4,843.7	4,823.2	4,822.0	15.0	4.1	20.64	791.0	469.6	230.2	216.5	13.72	16.779	
5,000.0	4,942.3	4,922.0	4,920.7	15.4	4.2	21.39	795.5	470.1	218.1	204.0	14.08	15.491	
5,100.0	5,040.9	5,021.8	5,020.4	15.7	4.3	22.13	800.3	470.2	206.0	191.5	14.44	14.260	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - MCCONAHAY 41-34 (EXISTING) - ENCANA WELL - GYRO

Offset Site Error: 0.0 ft

Survey Program: 200-Gyro

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	5,139.5	5,121.8	5,120.2	16.1	4.4	22.88	805.0	469.9	193.6	178.7	14.82	13.063	
5,300.0	5,238.1	5,221.9	5,220.3	16.4	4.5	23.78	809.4	469.3	180.7	165.5	15.21	11.879	
5,400.0	5,336.7	5,321.7	5,320.0	16.7	4.6	25.01	813.0	468.7	167.4	151.7	15.65	10.696	
5,500.0	5,435.3	5,420.9	5,419.0	17.1	4.7	26.58	816.2	468.1	154.0	137.8	16.14	9.539	
5,600.0	5,534.0	5,520.0	5,518.2	17.4	4.8	28.62	819.0	467.8	140.6	123.9	16.70	8.421	
5,700.0	5,632.6	5,620.0	5,618.1	17.7	4.8	31.17	821.4	467.1	127.0	109.7	17.35	7.321	
5,800.0	5,731.2	5,719.4	5,717.5	18.1	4.9	34.34	823.4	465.9	113.1	95.0	18.10	6.245	
5,900.0	5,829.8	5,818.4	5,816.4	18.4	5.0	38.52	825.0	464.5	99.1	80.1	19.02	5.210	
6,000.0	5,928.4	5,916.8	5,914.9	18.8	5.1	43.95	826.7	463.2	86.0	65.9	20.14	4.271	
6,100.0	6,027.0	6,015.8	6,013.9	19.1	5.2	51.20	828.5	461.8	73.9	52.4	21.50	3.437	
6,200.0	6,125.6	6,114.6	6,112.6	19.4	5.3	61.25	830.0	460.2	63.1	40.0	23.09	2.734	
6,300.0	6,224.3	6,213.1	6,211.0	19.8	5.4	75.17	830.9	458.7	55.3	30.6	24.68	2.239	
6,400.0	6,322.9	6,311.4	6,309.4	20.1	5.4	92.28	831.6	457.6	52.1	26.6	25.55	2.040	
6,406.7	6,329.5	6,318.0	6,316.0	20.1	5.4	93.48	831.6	457.5	52.1	26.5	25.56	2.038	CC, ES, SF
6,500.0	6,421.5	6,409.7	6,407.7	20.5	5.5	109.78	831.8	456.9	54.6	29.5	25.15	2.173	
6,600.0	6,520.1	6,508.4	6,506.3	20.8	5.6	124.58	831.9	456.4	62.0	38.1	23.93	2.591	
6,700.0	6,618.7	6,607.1	6,605.1	21.1	5.7	135.77	832.1	455.7	72.4	49.7	22.65	3.196	
6,800.0	6,717.3	6,705.6	6,703.6	21.5	5.8	144.09	832.3	454.8	84.7	63.1	21.62	3.919	
6,900.0	6,815.9	6,803.5	6,801.4	21.8	5.9	150.10	832.1	454.1	98.9	77.9	20.93	4.722	
7,000.0	6,914.6	6,901.9	6,899.9	22.1	6.0	164.98	831.6	453.4	114.1	93.6	20.47	5.572	
7,100.0	7,013.6	7,001.0	6,998.9	22.3	6.0	-128.74	831.0	452.7	126.9	106.1	20.74	6.117	
7,200.0	7,110.8	7,097.5	7,095.5	22.4	6.1	-109.95	830.2	452.4	137.7	115.7	21.95	6.272	
7,300.0	7,203.3	7,191.0	7,188.9	22.3	6.2	-112.44	829.3	451.5	152.6	129.2	23.42	6.516	
7,400.0	7,288.3	7,275.2	7,273.1	22.1	6.3	-119.65	828.5	450.9	179.3	155.2	24.08	7.445	
7,500.0	7,363.1	7,350.4	7,348.3	21.8	6.3	-126.08	827.9	450.9	223.5	199.9	23.65	9.451	
7,600.0	7,425.5	7,413.5	7,411.4	21.5	6.4	-129.07	827.9	451.0	284.6	262.0	22.52	12.635	
7,700.0	7,473.6	7,460.2	7,458.2	21.2	6.4	-127.03	828.1	451.2	359.7	338.3	21.42	16.794	
7,800.0	7,506.0	7,491.0	7,488.9	21.0	6.5	-118.24	828.2	451.4	445.1	424.0	21.13	21.065	
7,900.0	7,521.6	7,505.3	7,503.2	20.9	6.5	-99.35	828.3	451.5	536.7	514.9	21.88	24.533	
8,000.0	7,523.0	7,505.7	7,503.7	21.0	6.5	-88.41	828.3	451.5	631.1	608.4	22.67	27.843	
8,100.0	7,523.0	7,504.8	7,502.7	21.4	6.5	-88.13	828.3	451.5	727.0	703.1	23.82	30.523	
8,200.0	7,523.0	7,503.8	7,501.8	22.1	6.5	-87.85	828.3	451.5	823.8	798.6	25.21	32.672	
8,300.0	7,523.0	7,502.9	7,500.8	23.3	6.5	-87.57	828.3	451.5	921.3	894.5	26.81	34.367	
8,400.0	7,523.0	7,502.0	7,499.9	24.7	6.5	-87.29	828.2	451.5	1,019.3	990.7	28.56	35.696	
8,500.0	7,523.0	7,500.0	7,497.9	26.3	6.5	-86.71	828.2	451.5	1,117.7	1,087.2	30.41	36.750	
8,600.0	7,523.0	7,500.0	7,497.9	28.1	6.5	-86.71	828.2	451.5	1,216.3	1,183.9	32.38	37.563	
8,700.0	7,523.0	7,500.0	7,497.9	30.1	6.5	-86.71	828.2	451.5	1,315.1	1,280.7	34.42	38.206	

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 McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - MCCONAHAY 6-4-34 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 1089-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	-109.67	-179.2	-501.3	533.0				
100.0	100.0	75.0	75.0	0.1	0.1	-109.68	-179.3	-501.3	532.4	532.2	0.26	2,016.465	CC
200.0	200.0	174.7	174.7	0.3	0.3	-109.72	-179.7	-501.3	532.5	531.9	0.62	865.349	ES
300.0	300.0	274.3	274.3	0.5	0.5	-135.52	-180.3	-501.2	533.3	532.3	0.97	547.032	
400.0	400.0	373.8	373.8	0.7	0.7	-135.80	-181.2	-501.1	535.4	534.0	1.33	402.154	
500.0	499.9	473.3	473.3	0.8	0.9	-136.22	-182.4	-501.0	538.8	537.1	1.69	318.621	
600.0	599.7	572.6	572.6	1.0	1.0	-136.79	-183.9	-500.8	543.6	541.6	2.06	264.462	
700.0	699.4	671.8	671.7	1.3	1.2	-137.48	-185.7	-500.6	549.9	547.5	2.43	226.677	
800.0	798.9	770.7	770.6	1.5	1.4	-138.29	-187.8	-500.4	557.6	554.8	2.80	198.986	
900.0	898.3	869.3	869.2	1.7	1.6	-139.21	-190.1	-500.2	566.8	563.7	3.18	177.984	
1,000.0	997.4	967.6	967.5	2.0	1.7	-140.22	-192.7	-499.9	577.7	574.1	3.57	161.667	
1,100.0	1,096.3	1,065.5	1,065.4	2.3	1.9	-141.32	-195.5	-499.6	590.2	586.2	3.97	148.773	
1,200.0	1,195.0	1,162.7	1,162.5	2.6	2.1	-142.48	-198.5	-499.4	604.2	599.9	4.36	138.532	
1,300.0	1,293.6	1,261.7	1,261.4	3.0	2.3	-143.64	-201.2	-499.4	618.8	614.1	4.76	130.064	
1,400.0	1,392.2	1,357.7	1,357.4	3.3	2.5	-144.79	-204.5	-499.1	633.7	628.5	5.15	122.936	
1,500.0	1,490.8	1,450.1	1,449.6	3.6	2.7	-146.11	-210.6	-497.7	649.4	643.9	5.56	116.859	
1,600.0	1,589.4	1,549.8	1,548.6	3.9	2.9	-147.84	-221.0	-494.2	665.9	660.0	5.98	111.274	
1,700.0	1,688.0	1,627.3	1,625.3	4.3	3.1	-149.34	-231.6	-490.7	683.9	677.6	6.38	107.220	
1,800.0	1,786.6	1,704.1	1,701.0	4.6	3.4	-150.93	-245.0	-487.9	705.5	698.7	6.78	104.062	
1,900.0	1,885.3	1,783.0	1,778.0	4.9	3.6	-152.65	-261.5	-485.2	730.0	722.8	7.20	101.439	
2,000.0	1,983.9	1,874.7	1,866.7	5.3	4.0	-154.79	-284.2	-481.1	757.1	749.4	7.66	98.885	
2,100.0	2,082.5	1,989.6	1,978.0	5.6	4.5	-157.38	-311.8	-473.0	782.8	774.6	8.17	95.788	
2,200.0	2,181.1	2,088.0	2,073.5	5.9	4.9	-159.40	-334.0	-465.5	808.2	799.6	8.64	93.574	
2,300.0	2,279.7	2,178.9	2,162.0	6.3	5.2	-161.15	-354.2	-458.5	834.3	825.2	9.08	91.857	
2,400.0	2,378.3	2,268.2	2,248.6	6.6	5.6	-162.78	-374.5	-451.9	861.6	852.0	9.51	90.600	
2,500.0	2,476.9	2,357.9	2,336.0	6.9	6.0	-164.25	-394.2	-446.3	889.8	879.9	9.93	89.608	
2,600.0	2,575.6	2,446.1	2,421.7	7.3	6.3	-165.59	-413.9	-441.2	919.1	908.8	10.34	88.890	
2,700.0	2,674.2	2,534.2	2,507.5	7.6	6.7	-166.84	-433.7	-436.7	949.3	938.6	10.75	88.348	
2,800.0	2,772.8	2,622.8	2,593.5	8.0	7.1	-168.04	-454.2	-432.3	980.6	969.5	11.15	87.936	
2,900.0	2,871.4	2,725.2	2,693.1	8.3	7.5	-169.34	-477.6	-427.0	1,012.1	1,000.5	11.58	87.377	
3,000.0	2,970.0	2,825.3	2,790.7	8.6	7.9	-170.51	-499.3	-421.6	1,042.8	1,030.8	12.01	86.863	
3,100.0	3,068.6	2,910.4	2,873.6	9.0	8.3	-171.45	-517.9	-417.0	1,074.1	1,061.7	12.39	86.677	
3,200.0	3,167.2	2,992.8	2,953.7	9.3	8.6	-172.34	-536.8	-412.6	1,106.5	1,093.8	12.77	86.623	
3,300.0	3,265.8	3,071.0	3,029.5	9.6	9.0	-173.16	-555.7	-408.6	1,140.3	1,127.2	13.15	86.744	
3,400.0	3,364.5	3,174.6	3,129.9	10.0	9.5	-174.18	-580.7	-403.5	1,174.5	1,160.9	13.57	86.543	
3,500.0	3,463.1	3,274.5	3,226.8	10.3	9.9	-175.11	-604.1	-398.1	1,208.1	1,194.1	13.99	86.346	
3,600.0	3,561.7	3,358.8	3,308.6	10.6	10.3	-175.84	-623.9	-393.8	1,242.1	1,227.8	14.36	86.472	
3,700.0	3,660.3	3,476.9	3,423.6	11.0	10.8	-176.81	-650.7	-387.3	1,275.5	1,260.7	14.82	86.056	
3,800.0	3,758.9	3,571.0	3,515.2	11.3	11.2	-177.52	-671.1	-381.9	1,308.2	1,293.0	15.22	85.969	
3,900.0	3,857.5	3,655.6	3,597.6	11.7	11.5	-178.13	-689.8	-377.3	1,341.5	1,325.9	15.59	86.038	
4,000.0	3,956.1	3,750.4	3,689.8	12.0	12.0	-178.81	-711.0	-371.7	1,375.0	1,359.0	16.00	85.935	SF
4,100.0	4,054.8	3,830.4	3,767.3	12.3	12.3	-179.42	-729.9	-365.9	1,409.3	1,392.9	16.38	86.013	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - RANCHERO 32-34 (EXISTING) - ENCANA WELL - GYROS

Offset Site Error: 0.0 ft

Survey Program: 200-Gyro

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	-119.28	-487.8	-869.8	997.3				
100.0	100.0	86.0	86.0	0.1	0.0	-119.28	-487.8	-869.8	997.2	997.1	0.13	7,608.018	CC
200.0	200.0	181.8	181.8	0.3	0.1	-119.28	-487.7	-870.0	997.4	997.0	0.38	2,645.506	ES
300.0	300.0	281.8	281.8	0.5	0.2	-144.94	-487.5	-870.6	998.6	997.9	0.64	1,562.180	
400.0	400.0	383.5	383.5	0.7	0.2	-144.97	-486.9	-871.3	1,001.0	1,000.1	0.90	1,106.650	
500.0	499.9	483.3	483.2	0.8	0.3	-145.03	-486.1	-872.1	1,004.8	1,003.7	1.17	858.062	
600.0	599.7	574.9	574.9	1.0	0.4	-145.12	-485.5	-873.1	1,010.5	1,009.0	1.43	704.421	
700.0	699.4	670.9	670.9	1.3	0.5	-145.26	-485.2	-874.7	1,018.2	1,016.5	1.71	596.645	
800.0	798.9	769.0	769.0	1.5	0.6	-145.45	-485.0	-876.5	1,027.6	1,025.6	1.99	517.278	
900.0	898.3	872.7	872.6	1.7	0.7	-145.68	-484.6	-878.4	1,038.4	1,036.1	2.28	455.734	
1,000.0	997.4	973.7	973.6	2.0	0.8	-145.94	-483.7	-880.1	1,050.2	1,047.6	2.58	407.777	
1,100.0	1,096.3	1,072.2	1,072.1	2.3	0.9	-146.26	-483.4	-881.4	1,063.4	1,060.5	2.88	369.635	
1,200.0	1,195.0	1,170.3	1,170.2	2.6	0.9	-146.67	-483.5	-882.4	1,078.1	1,074.9	3.18	338.667	
1,300.0	1,293.6	1,266.3	1,266.2	3.0	1.0	-147.08	-483.2	-883.8	1,093.1	1,089.6	3.49	313.320	
1,400.0	1,392.2	1,367.1	1,367.0	3.3	1.1	-147.51	-483.2	-885.3	1,108.3	1,104.5	3.80	291.850	
1,500.0	1,490.8	1,467.8	1,467.7	3.6	1.2	-147.94	-483.1	-886.3	1,123.3	1,119.2	4.11	273.586	
1,600.0	1,589.4	1,562.4	1,562.3	3.9	1.3	-148.33	-482.9	-887.5	1,138.3	1,133.9	4.41	258.221	
1,700.0	1,688.0	1,657.8	1,657.7	4.3	1.4	-148.70	-482.9	-889.1	1,153.8	1,149.1	4.71	244.928	
1,800.0	1,786.6	1,758.2	1,758.1	4.6	1.5	-149.07	-482.6	-890.9	1,169.5	1,164.5	5.02	233.102	
1,900.0	1,885.3	1,858.0	1,857.8	4.9	1.5	-149.42	-482.1	-892.6	1,184.9	1,179.6	5.32	222.669	
2,000.0	1,983.9	1,958.0	1,957.8	5.3	1.6	-149.77	-481.8	-894.2	1,200.4	1,194.8	5.62	213.412	
2,100.0	2,082.5	2,059.7	2,059.5	5.6	1.7	-150.11	-481.1	-895.7	1,215.7	1,209.7	5.93	205.046	
2,200.0	2,181.1	2,157.2	2,156.9	5.9	1.8	-150.42	-480.3	-897.1	1,230.8	1,224.6	6.23	197.613	
2,300.0	2,279.7	2,254.9	2,254.7	6.3	1.9	-150.72	-479.5	-898.7	1,246.2	1,239.7	6.53	190.906	
2,400.0	2,378.3	2,353.8	2,353.5	6.6	2.0	-150.98	-478.1	-900.8	1,261.6	1,254.8	6.83	184.742	
2,500.0	2,476.9	2,449.5	2,449.2	6.9	2.1	-151.24	-476.9	-902.7	1,277.1	1,270.0	7.13	179.211	
2,600.0	2,575.6	2,547.2	2,546.8	7.3	2.2	-151.48	-475.7	-905.1	1,292.9	1,285.5	7.43	174.121	
2,700.0	2,674.2	2,651.8	2,651.4	7.6	2.3	-151.71	-473.7	-907.7	1,308.5	1,300.8	7.73	169.255	
2,800.0	2,772.8	2,760.2	2,759.7	8.0	2.4	-151.92	-470.9	-910.3	1,323.5	1,315.4	8.04	164.605	
2,900.0	2,871.4	2,864.3	2,863.8	8.3	2.4	-152.11	-467.7	-912.2	1,337.8	1,329.5	8.35	160.300	
3,000.0	2,970.0	2,968.6	2,968.0	8.6	2.5	-152.30	-464.4	-913.8	1,351.9	1,343.2	8.65	156.289	
3,100.0	3,068.6	3,081.7	3,081.0	9.0	2.6	-152.52	-460.6	-914.8	1,365.3	1,356.4	8.96	152.378	
3,200.0	3,167.2	3,185.8	3,185.1	9.3	2.7	-152.71	-456.6	-914.9	1,377.9	1,368.7	9.26	148.773	
3,300.0	3,265.8	3,292.4	3,291.6	9.6	2.8	-152.93	-452.7	-914.5	1,390.2	1,380.6	9.56	145.378	
3,400.0	3,364.5	3,391.5	3,390.6	10.0	2.9	-153.16	-449.4	-913.5	1,402.1	1,392.3	9.85	142.287	
8,100.0	7,523.0	7,482.0	7,480.1	21.4	6.5	-88.45	-390.2	-891.6	1,388.4	1,364.6	23.80	58.333	
8,200.0	7,523.0	7,482.0	7,480.1	22.1	6.5	-88.45	-390.2	-891.6	1,326.7	1,301.5	25.21	52.635	
8,300.0	7,523.0	7,482.0	7,480.1	23.3	6.5	-88.45	-390.2	-891.6	1,269.8	1,243.0	26.81	47.371	
8,400.0	7,523.0	7,482.0	7,480.1	24.7	6.5	-88.45	-390.2	-891.6	1,218.5	1,190.0	28.56	42.664	
8,500.0	7,523.0	7,482.0	7,480.1	26.3	6.5	-88.45	-390.2	-891.6	1,173.5	1,143.1	30.44	38.558	
8,600.0	7,523.0	7,482.0	7,480.1	28.1	6.5	-88.45	-390.2	-891.6	1,135.6	1,103.2	32.40	35.044	
8,700.0	7,523.0	7,482.0	7,480.1	30.1	6.5	-88.45	-390.2	-891.6	1,105.4	1,070.9	34.45	32.089	
8,800.0	7,523.0	7,482.0	7,480.1	32.0	6.5	-88.45	-390.2	-891.6	1,083.6	1,047.1	36.55	29.647	
8,900.0	7,523.0	7,482.0	7,480.1	34.1	6.5	-88.45	-390.2	-891.6	1,070.8	1,032.1	38.70	27.669	
8,988.3	7,523.0	7,482.0	7,480.1	35.9	6.5	-88.45	-390.2	-891.6	1,067.1	1,026.5	40.63	26.263	
9,000.0	7,523.0	7,482.0	7,480.1	36.2	6.5	-88.45	-390.2	-891.6	1,067.2	1,026.3	40.89	26.100	
9,100.0	7,523.0	7,482.0	7,480.1	38.3	6.5	-88.45	-390.2	-891.6	1,073.0	1,029.9	43.11	24.890	
9,200.0	7,523.0	7,482.0	7,480.1	40.5	6.5	-88.45	-390.2	-891.6	1,087.9	1,042.6	45.36	23.987	
9,300.0	7,523.0	7,482.0	7,480.1	42.7	6.5	-88.45	-390.2	-891.6	1,111.7	1,064.1	47.62	23.344	
9,400.0	7,523.0	7,482.0	7,480.1	44.9	6.5	-88.45	-390.2	-891.6	1,143.8	1,093.9	49.91	22.917	
9,500.0	7,523.0	7,482.0	7,480.1	47.2	6.5	-88.45	-390.2	-891.6	1,183.5	1,131.3	52.22	22.666	
9,600.0	7,523.0	7,482.0	7,480.1	49.4	6.5	-88.45	-390.2	-891.6	1,230.0	1,175.5	54.53	22.556	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 McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R66W (McConahay) - RANCHERO 32-34 (EXISTING) - ENCANA WELL - GYROS

Offset Site Error: 0.0 ft

Survey Program: 200-Gyro

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,700.0	7,523.0	7,482.0	7,480.1	51.7	6.5	-88.45	-390.2	-891.6	1,282.7	1,225.8	56.86	22.559	
9,800.0	7,523.0	7,482.0	7,480.1	54.0	6.5	-88.45	-390.2	-891.6	1,340.8	1,281.6	59.20	22.649	
9,900.0	7,523.0	7,482.0	7,480.1	56.3	6.5	-88.45	-390.2	-891.6	1,403.6	1,342.0	61.55	22.805	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S34-T2N-R68W (Billings, Erica) - Erica 1 - DD - DD

Offset Site Error: 0.0 ft

Survey Program: 100-Gyro

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,000.0	7,523.0	7,458.7	7,458.0	58.6	6.5	90.46	730.9	-3,455.4	1,369.6	1,305.7	63.97	21.410	
10,100.0	7,523.0	7,458.3	7,457.6	60.9	6.5	90.42	730.9	-3,455.4	1,281.2	1,214.9	66.33	19.314	
10,200.0	7,523.0	7,457.9	7,457.2	63.3	6.5	90.39	730.9	-3,455.4	1,194.6	1,125.9	68.70	17.388	
10,300.0	7,523.0	7,457.5	7,456.8	65.6	6.5	90.35	730.9	-3,455.4	1,110.2	1,039.2	71.08	15.620	
10,400.0	7,523.0	7,457.1	7,456.4	68.0	6.5	90.31	730.9	-3,455.4	1,028.7	955.2	73.46	14.004	
10,500.0	7,523.0	7,456.7	7,456.0	70.3	6.5	90.27	730.9	-3,455.4	950.7	874.8	75.84	12.536	
10,600.0	7,523.0	7,456.3	7,455.5	72.7	6.5	90.24	730.9	-3,455.4	877.1	798.9	78.23	11.213	
10,700.0	7,523.0	7,455.9	7,455.1	75.0	6.5	90.20	730.9	-3,455.4	809.3	728.7	80.62	10.039	
10,800.0	7,523.0	7,455.5	7,454.7	77.4	6.5	90.16	730.9	-3,455.4	748.7	665.6	83.07	9.013	
10,900.0	7,523.0	7,455.1	7,454.3	79.8	6.5	90.13	730.9	-3,455.4	694.8	608.9	85.89	8.089	
11,000.0	7,523.0	7,454.7	7,453.9	82.2	6.5	90.09	730.9	-3,455.4	647.8	559.2	88.59	7.312	
11,100.0	7,523.0	7,454.3	7,453.5	84.7	6.5	90.05	730.9	-3,455.4	609.4	518.3	91.15	6.686	
11,200.0	7,523.0	7,453.9	7,453.2	87.1	6.5	90.02	730.9	-3,455.4	581.4	487.8	93.56	6.214	
11,300.0	7,523.0	7,453.5	7,452.8	89.5	6.5	89.98	730.9	-3,455.4	565.4	469.5	95.82	5.900	
11,372.4	7,523.0	7,453.2	7,452.5	91.3	6.5	89.95	730.9	-3,455.4	561.9	464.5	97.36	5.771	CC
11,400.0	7,523.0	7,453.1	7,452.4	92.0	6.5	89.94	730.9	-3,455.4	562.4	464.5	97.92	5.743	ES
11,500.0	7,523.0	7,452.7	7,452.0	94.4	6.5	89.90	730.9	-3,455.4	572.7	472.8	99.95	5.730	SF
11,600.0	7,523.0	7,452.4	7,451.6	96.8	6.5	89.86	730.9	-3,455.4	598.3	495.9	102.39	5.843	
11,638.3	7,523.0	7,452.2	7,451.5	97.7	6.5	89.85	730.9	-3,455.4	612.2	508.9	103.33	5.925	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well McConahay 1B-34H-H266
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Reference Site:	S34-T2N-R66W (McConahay)	**MD Reference:**	WELL @ 5087.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	McConahay 1B-34H-H266	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5087.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: McConahay 1B-34H-H266
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.48°