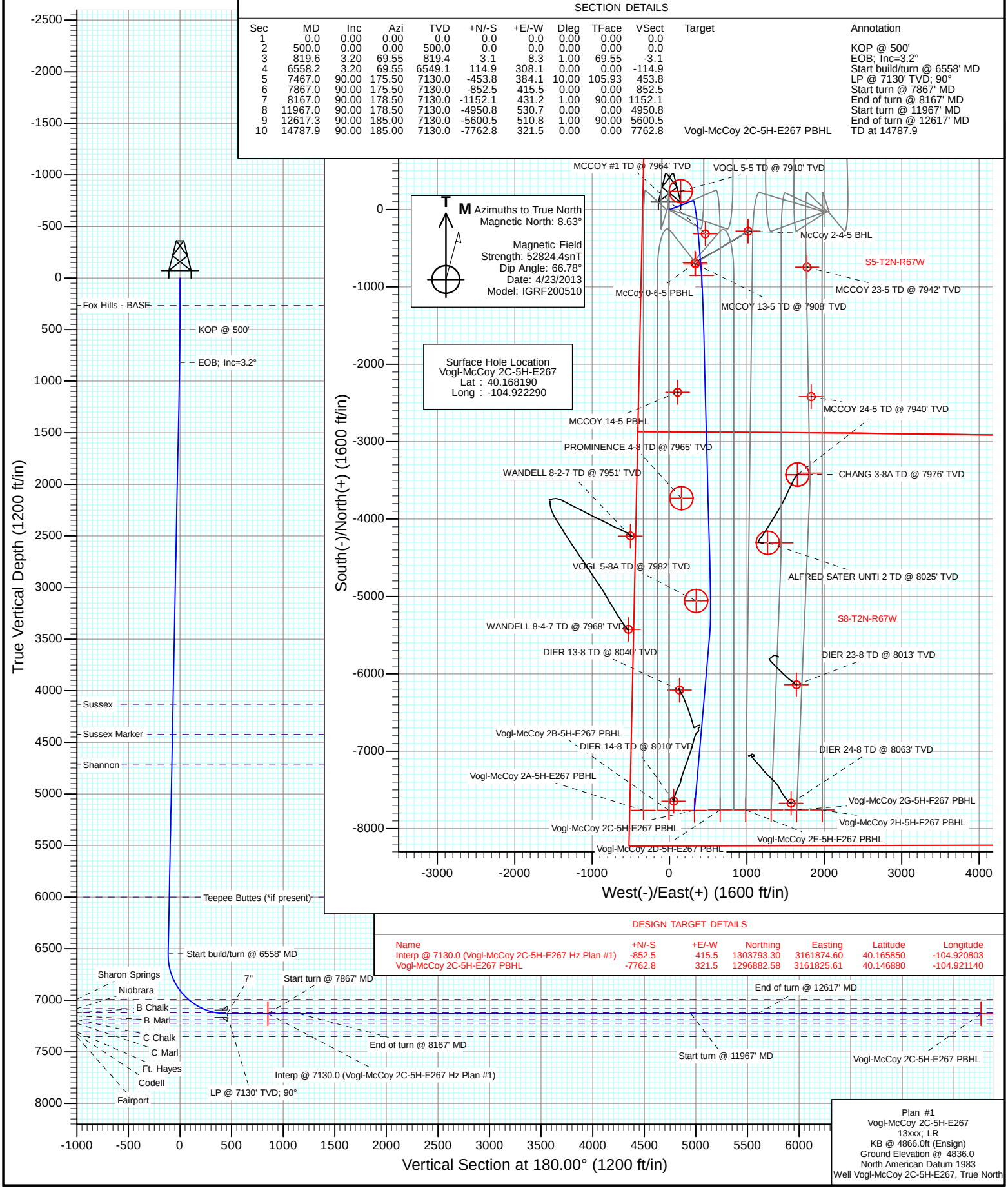
encana

Project: DJ Wattenberg
Site: S5-T2N-R67W (Vogl-McCoy)
Well: Vogl-McCoy 2C-5H-E267
Wellbore: Hz
Design: Plan #1

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0		KOP @ 500'
3	819.6	3.20	69.55	819.4	3.1	8.3	1.00	69.55	-3.1		EOB; Inc=3.2°
4	6558.2	3.20	69.55	6549.1	114.9	308.1	0.00	0.00	-114.9		Start build/turn @ 6558' MD
5	7467.0	90.00	175.50	7130.0	-453.8	384.1	10.00	105.93	453.8		LP @ 7130' TVD; 90°
6	7867.0	90.00	175.50	7130.0	-852.5	415.5	0.00	0.00	852.5		Start turn @ 7867' MD
7	8167.0	90.00	178.50	7130.0	-1152.1	431.2	1.00	90.00	1152.1		End of turn @ 8167' MD
8	11967.0	90.00	178.50	7130.0	-4950.8	530.7	0.00	0.00	4950.8		Start turn @ 11967' MD
9	12617.3	90.00	185.00	7130.0	-5600.5	510.8	1.00	90.00	5600.5		End of turn @ 12617' MD
10	14787.9	90.00	185.00	7130.0	-7762.8	321.5	0.00	0.00	7762.8	Vogl-McCoy 2C-5H-E267 PBHL	TD at 14787.9



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Interp @ 7130.0 (Vogl-McCoy 2C-5H-E267 Hz Plan #1)	-852.5	415.5	1303793.30	3161874.60	40.165850	-104.920803
Vogl-McCoy 2C-5H-E267 PBHL	-7762.8	321.5	1296882.58	3161825.61	40.146880	-104.921140

Plan #1
Vogl-McCoy 2C-5H-E267
13xxx; LR
KB @ 4866.0ft (Ensign)
Ground Elevation @ 4836.0
North American Datum 1983
Well Vogl-McCoy 2C-5H-E267, True North

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Project DJ Wattenberg

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

Site S5-T2N-R67W (Vogl-McCoy)

Site Position:		**Northing:**	1,303,967.76 ft	**Latitude:**	40.166330
From:	Lat/Long	**Easting:**	3,161,787.74 ft	**Longitude:**	-104.921110
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.37 °

Well Vogl-McCoy 2C-5H-E267

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,304,643.12 ft	**Latitude:**	40.168190
	+E/-W	0.0 ft	**Easting:**	3,161,453.56 ft	**Longitude:**	-104.922290
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,836.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/23/2013	8.63	66.78	52,824

Design Plan #1

Audit Notes:

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

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

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
819.6	3.20	69.55	819.4	3.1	8.3	1.00	1.00	0.00	69.55	
6,558.2	3.20	69.55	6,549.1	114.9	308.1	0.00	0.00	0.00	0.00	
7,467.0	90.00	175.50	7,130.0	-453.8	384.1	10.00	9.55	11.66	105.93	
7,867.0	90.00	175.50	7,130.0	-852.5	415.5	0.00	0.00	0.00	0.00	Interp @ 7130.0 (Vog
8,167.0	90.00	178.50	7,130.0	-1,152.1	431.2	1.00	0.00	1.00	90.00	
11,967.0	90.00	178.50	7,130.0	-4,950.8	530.7	0.00	0.00	0.00	0.00	
12,617.3	90.00	185.00	7,130.0	-5,600.5	510.8	1.00	0.00	1.00	90.00	
14,787.9	90.00	185.00	7,130.0	-7,762.8	321.5	0.00	0.00	0.00	0.00	Vogl-McCoy 2C-5H-E

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Project:	DJ Wattenberg	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
266.0	0.00	0.00	266.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500'
600.0	1.00	69.55	600.0	0.3	0.8	-0.3	1.00	1.00	
700.0	2.00	69.55	700.0	1.2	3.3	-1.2	1.00	1.00	
800.0	3.00	69.55	799.9	2.7	7.4	-2.7	1.00	1.00	
819.6	3.20	69.55	819.4	3.1	8.3	-3.1	1.00	1.00	EOB; Inc=3.2°
900.0	3.20	69.55	899.7	4.7	12.5	-4.7	0.00	0.00	
1,000.0	3.20	69.55	999.6	6.6	17.8	-6.6	0.00	0.00	
1,100.0	3.20	69.55	1,099.4	8.6	23.0	-8.6	0.00	0.00	
1,200.0	3.20	69.55	1,199.2	10.5	28.2	-10.5	0.00	0.00	
1,300.0	3.20	69.55	1,299.1	12.5	33.4	-12.5	0.00	0.00	
1,400.0	3.20	69.55	1,398.9	14.4	38.7	-14.4	0.00	0.00	
1,500.0	3.20	69.55	1,498.8	16.4	43.9	-16.4	0.00	0.00	
1,600.0	3.20	69.55	1,598.6	18.3	49.1	-18.3	0.00	0.00	
1,700.0	3.20	69.55	1,698.5	20.3	54.3	-20.3	0.00	0.00	
1,800.0	3.20	69.55	1,798.3	22.2	59.6	-22.2	0.00	0.00	
1,900.0	3.20	69.55	1,898.2	24.2	64.8	-24.2	0.00	0.00	
2,000.0	3.20	69.55	1,998.0	26.1	70.0	-26.1	0.00	0.00	
2,100.0	3.20	69.55	2,097.8	28.1	75.2	-28.1	0.00	0.00	
2,200.0	3.20	69.55	2,197.7	30.0	80.4	-30.0	0.00	0.00	
2,300.0	3.20	69.55	2,297.5	32.0	85.7	-32.0	0.00	0.00	
2,400.0	3.20	69.55	2,397.4	33.9	90.9	-33.9	0.00	0.00	
2,500.0	3.20	69.55	2,497.2	35.8	96.1	-35.8	0.00	0.00	
2,600.0	3.20	69.55	2,597.1	37.8	101.3	-37.8	0.00	0.00	
2,700.0	3.20	69.55	2,696.9	39.7	106.6	-39.7	0.00	0.00	
2,800.0	3.20	69.55	2,796.8	41.7	111.8	-41.7	0.00	0.00	
2,900.0	3.20	69.55	2,896.6	43.6	117.0	-43.6	0.00	0.00	
3,000.0	3.20	69.55	2,996.4	45.6	122.2	-45.6	0.00	0.00	
3,100.0	3.20	69.55	3,096.3	47.5	127.5	-47.5	0.00	0.00	
3,200.0	3.20	69.55	3,196.1	49.5	132.7	-49.5	0.00	0.00	
3,300.0	3.20	69.55	3,296.0	51.4	137.9	-51.4	0.00	0.00	
3,400.0	3.20	69.55	3,395.8	53.4	143.1	-53.4	0.00	0.00	
3,500.0	3.20	69.55	3,495.7	55.3	148.3	-55.3	0.00	0.00	
3,600.0	3.20	69.55	3,595.5	57.3	153.6	-57.3	0.00	0.00	
3,700.0	3.20	69.55	3,695.4	59.2	158.8	-59.2	0.00	0.00	
3,800.0	3.20	69.55	3,795.2	61.2	164.0	-61.2	0.00	0.00	
3,900.0	3.20	69.55	3,895.0	63.1	169.2	-63.1	0.00	0.00	
4,000.0	3.20	69.55	3,994.9	65.1	174.5	-65.1	0.00	0.00	
4,100.0	3.20	69.55	4,094.7	67.0	179.7	-67.0	0.00	0.00	
4,136.3	3.20	69.55	4,131.0	67.7	181.6	-67.7	0.00	0.00	Sussex
4,200.0	3.20	69.55	4,194.6	69.0	184.9	-69.0	0.00	0.00	
4,300.0	3.20	69.55	4,294.4	70.9	190.1	-70.9	0.00	0.00	
4,400.0	3.20	69.55	4,394.3	72.9	195.4	-72.9	0.00	0.00	
4,427.8	3.20	69.55	4,422.0	73.4	196.8	-73.4	0.00	0.00	Sussex Marker
4,500.0	3.20	69.55	4,494.1	74.8	200.6	-74.8	0.00	0.00	
4,600.0	3.20	69.55	4,594.0	76.8	205.8	-76.8	0.00	0.00	
4,700.0	3.20	69.55	4,693.8	78.7	211.0	-78.7	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,725.2	3.20	69.55	4,719.0	79.2	212.3	-79.2	0.00	0.00	Shannon
4,800.0	3.20	69.55	4,793.6	80.7	216.2	-80.7	0.00	0.00	
4,900.0	3.20	69.55	4,893.5	82.6	221.5	-82.6	0.00	0.00	
5,000.0	3.20	69.55	4,993.3	84.6	226.7	-84.6	0.00	0.00	
5,100.0	3.20	69.55	5,093.2	86.5	231.9	-86.5	0.00	0.00	
5,200.0	3.20	69.55	5,193.0	88.4	237.1	-88.4	0.00	0.00	
5,300.0	3.20	69.55	5,292.9	90.4	242.4	-90.4	0.00	0.00	
5,400.0	3.20	69.55	5,392.7	92.3	247.6	-92.3	0.00	0.00	
5,500.0	3.20	69.55	5,492.6	94.3	252.8	-94.3	0.00	0.00	
5,600.0	3.20	69.55	5,592.4	96.2	258.0	-96.2	0.00	0.00	
5,700.0	3.20	69.55	5,692.2	98.2	263.3	-98.2	0.00	0.00	
5,800.0	3.20	69.55	5,792.1	100.1	268.5	-100.1	0.00	0.00	
5,900.0	3.20	69.55	5,891.9	102.1	273.7	-102.1	0.00	0.00	
6,000.0	3.20	69.55	5,991.8	104.0	278.9	-104.0	0.00	0.00	
6,008.2	3.20	69.55	6,000.0	104.2	279.4	-104.2	0.00	0.00	Teepee Buttes (*if present)
6,100.0	3.20	69.55	6,091.6	106.0	284.1	-106.0	0.00	0.00	
6,200.0	3.20	69.55	6,191.5	107.9	289.4	-107.9	0.00	0.00	
6,300.0	3.20	69.55	6,291.3	109.9	294.6	-109.9	0.00	0.00	
6,400.0	3.20	69.55	6,391.2	111.8	299.8	-111.8	0.00	0.00	
6,500.0	3.20	69.55	6,491.0	113.8	305.0	-113.8	0.00	0.00	
6,558.2	3.20	69.55	6,549.1	114.9	308.1	-114.9	0.00	0.00	Start build/turn @ 6558' MD
6,600.0	4.51	132.61	6,590.8	114.2	310.4	-114.2	10.00	3.14	
6,700.0	13.65	162.73	6,689.5	100.2	316.8	-100.2	10.00	9.14	
6,800.0	23.49	168.41	6,784.2	69.4	324.3	-69.4	10.00	9.85	
6,900.0	33.43	170.84	6,872.0	22.5	332.7	-22.5	10.00	9.93	
7,000.0	43.39	172.24	6,950.3	-38.9	341.8	38.9	10.00	9.96	
7,059.0	49.28	172.85	6,991.0	-81.2	347.3	81.2	10.00	9.97	Sharon Springs
7,100.0	53.36	173.21	7,016.6	-112.9	351.2	112.9	10.00	9.98	
7,200.0	63.34	173.96	7,069.0	-197.4	360.7	197.4	10.00	9.98	
7,225.7	65.91	174.12	7,080.0	-220.5	363.1	220.5	10.00	9.98	Niobrara
7,300.0	73.33	174.58	7,105.9	-289.8	369.9	289.8	10.00	9.98	
7,359.7	79.29	174.92	7,120.0	-347.5	375.2	347.5	10.00	9.98	B Chalk
7,400.0	83.31	175.14	7,126.1	-387.2	378.7	387.2	10.00	9.99	
7,467.0	90.00	175.50	7,130.0	-453.8	384.1	453.8	10.00	9.99	LP @ 7130' TVD; 90°
7,470.6	90.00	175.50	7,130.0	-457.4	384.4	457.4	0.00	0.00	7"
7,500.0	90.00	175.50	7,130.0	-486.7	386.7	486.7	0.00	0.00	
7,600.0	90.00	175.50	7,130.0	-586.4	394.6	586.4	0.00	0.00	
7,700.0	90.00	175.50	7,130.0	-686.1	402.4	686.1	0.00	0.00	
7,800.0	90.00	175.50	7,130.0	-785.8	410.2	785.8	0.00	0.00	
7,867.0	90.00	175.50	7,130.0	-852.5	415.5	852.5	0.00	0.00	Start turn @ 7867' MD - Interp @ 7130.0 (Vogl-
7,900.0	90.00	175.83	7,130.0	-885.5	418.0	885.5	1.00	0.00	
8,000.0	90.00	176.83	7,130.0	-985.3	424.4	985.3	1.00	0.00	
8,100.0	90.00	177.83	7,130.0	-1,085.2	429.1	1,085.2	1.00	0.00	
8,167.0	90.00	178.50	7,130.0	-1,152.1	431.2	1,152.1	1.00	0.00	End of turn @ 8167' MD
8,200.0	90.00	178.50	7,130.0	-1,185.1	432.1	1,185.1	0.00	0.00	
8,300.0	90.00	178.50	7,130.0	-1,285.1	434.7	1,285.1	0.00	0.00	
8,400.0	90.00	178.50	7,130.0	-1,385.0	437.3	1,385.0	0.00	0.00	
8,500.0	90.00	178.50	7,130.0	-1,485.0	439.9	1,485.0	0.00	0.00	
8,600.0	90.00	178.50	7,130.0	-1,585.0	442.5	1,585.0	0.00	0.00	
8,700.0	90.00	178.50	7,130.0	-1,684.9	445.2	1,684.9	0.00	0.00	
8,800.0	90.00	178.50	7,130.0	-1,784.9	447.8	1,784.9	0.00	0.00	
8,900.0	90.00	178.50	7,130.0	-1,884.9	450.4	1,884.9	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,000.0	90.00	178.50	7,130.0	-1,984.8	453.0	1,984.8	0.00	0.00	
9,100.0	90.00	178.50	7,130.0	-2,084.8	455.6	2,084.8	0.00	0.00	
9,200.0	90.00	178.50	7,130.0	-2,184.8	458.2	2,184.8	0.00	0.00	
9,300.0	90.00	178.50	7,130.0	-2,284.7	460.9	2,284.7	0.00	0.00	
9,400.0	90.00	178.50	7,130.0	-2,384.7	463.5	2,384.7	0.00	0.00	
9,500.0	90.00	178.50	7,130.0	-2,484.7	466.1	2,484.7	0.00	0.00	
9,600.0	90.00	178.50	7,130.0	-2,584.6	468.7	2,584.6	0.00	0.00	
9,700.0	90.00	178.50	7,130.0	-2,684.6	471.3	2,684.6	0.00	0.00	
9,800.0	90.00	178.50	7,130.0	-2,784.6	473.9	2,784.6	0.00	0.00	
9,900.0	90.00	178.50	7,130.0	-2,884.5	476.6	2,884.5	0.00	0.00	
10,000.0	90.00	178.50	7,130.0	-2,984.5	479.2	2,984.5	0.00	0.00	
10,100.0	90.00	178.50	7,130.0	-3,084.5	481.8	3,084.5	0.00	0.00	
10,200.0	90.00	178.50	7,130.0	-3,184.4	484.4	3,184.4	0.00	0.00	
10,300.0	90.00	178.50	7,130.0	-3,284.4	487.0	3,284.4	0.00	0.00	
10,400.0	90.00	178.50	7,130.0	-3,384.4	489.7	3,384.4	0.00	0.00	
10,500.0	90.00	178.50	7,130.0	-3,484.3	492.3	3,484.3	0.00	0.00	
10,600.0	90.00	178.50	7,130.0	-3,584.3	494.9	3,584.3	0.00	0.00	
10,700.0	90.00	178.50	7,130.0	-3,684.3	497.5	3,684.3	0.00	0.00	
10,800.0	90.00	178.50	7,130.0	-3,784.2	500.1	3,784.2	0.00	0.00	
10,900.0	90.00	178.50	7,130.0	-3,884.2	502.7	3,884.2	0.00	0.00	
11,000.0	90.00	178.50	7,130.0	-3,984.2	505.4	3,984.2	0.00	0.00	
11,100.0	90.00	178.50	7,130.0	-4,084.1	508.0	4,084.1	0.00	0.00	
11,200.0	90.00	178.50	7,130.0	-4,184.1	510.6	4,184.1	0.00	0.00	
11,300.0	90.00	178.50	7,130.0	-4,284.1	513.2	4,284.1	0.00	0.00	
11,400.0	90.00	178.50	7,130.0	-4,384.0	515.8	4,384.0	0.00	0.00	
11,500.0	90.00	178.50	7,130.0	-4,484.0	518.4	4,484.0	0.00	0.00	
11,600.0	90.00	178.50	7,130.0	-4,583.9	521.1	4,583.9	0.00	0.00	
11,700.0	90.00	178.50	7,130.0	-4,683.9	523.7	4,683.9	0.00	0.00	
11,800.0	90.00	178.50	7,130.0	-4,783.9	526.3	4,783.9	0.00	0.00	
11,900.0	90.00	178.50	7,130.0	-4,883.8	528.9	4,883.8	0.00	0.00	
11,967.0	90.00	178.50	7,130.0	-4,950.8	530.7	4,950.8	0.00	0.00	Start turn @ 11967' MD
12,000.0	90.00	178.83	7,130.0	-4,983.8	531.4	4,983.8	1.00	0.00	
12,100.0	90.00	179.83	7,130.0	-5,083.8	532.6	5,083.8	1.00	0.00	
12,200.0	90.00	180.83	7,130.0	-5,183.8	532.0	5,183.8	1.00	0.00	
12,300.0	90.00	181.83	7,130.0	-5,283.8	529.7	5,283.8	1.00	0.00	
12,400.0	90.00	182.83	7,130.0	-5,383.7	525.6	5,383.7	1.00	0.00	
12,500.0	90.00	183.83	7,130.0	-5,483.5	519.8	5,483.5	1.00	0.00	
12,600.0	90.00	184.83	7,130.0	-5,583.2	512.3	5,583.2	1.00	0.00	
12,617.3	90.00	185.00	7,130.0	-5,600.5	510.8	5,600.5	1.00	0.00	End of turn @ 12617' MD
12,700.0	90.00	185.00	7,130.0	-5,682.9	503.6	5,682.9	0.00	0.00	
12,800.0	90.00	185.00	7,130.0	-5,782.5	494.9	5,782.5	0.00	0.00	
12,900.0	90.00	185.00	7,130.0	-5,882.1	486.1	5,882.1	0.00	0.00	
13,000.0	90.00	185.00	7,130.0	-5,981.7	477.4	5,981.7	0.00	0.00	
13,100.0	90.00	185.00	7,130.0	-6,081.3	468.7	6,081.3	0.00	0.00	
13,200.0	90.00	185.00	7,130.0	-6,180.9	460.0	6,180.9	0.00	0.00	
13,300.0	90.00	185.00	7,130.0	-6,280.6	451.3	6,280.6	0.00	0.00	
13,400.0	90.00	185.00	7,130.0	-6,380.2	442.5	6,380.2	0.00	0.00	
13,500.0	90.00	185.00	7,130.0	-6,479.8	433.8	6,479.8	0.00	0.00	
13,600.0	90.00	185.00	7,130.0	-6,579.4	425.1	6,579.4	0.00	0.00	
13,700.0	90.00	185.00	7,130.0	-6,679.0	416.4	6,679.0	0.00	0.00	
13,800.0	90.00	185.00	7,130.0	-6,778.7	407.6	6,778.7	0.00	0.00	
13,900.0	90.00	185.00	7,130.0	-6,878.3	398.9	6,878.3	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
14,000.0	90.00	185.00	7,130.0	-6,977.9	390.2	6,977.9	0.00	0.00	
14,100.0	90.00	185.00	7,130.0	-7,077.5	381.5	7,077.5	0.00	0.00	
14,200.0	90.00	185.00	7,130.0	-7,177.1	372.8	7,177.1	0.00	0.00	
14,300.0	90.00	185.00	7,130.0	-7,276.8	364.0	7,276.8	0.00	0.00	
14,400.0	90.00	185.00	7,130.0	-7,376.4	355.3	7,376.4	0.00	0.00	
14,500.0	90.00	185.00	7,130.0	-7,476.0	346.6	7,476.0	0.00	0.00	
14,600.0	90.00	185.00	7,130.0	-7,575.6	337.9	7,575.6	0.00	0.00	
14,700.0	90.00	185.00	7,130.0	-7,675.2	329.1	7,675.2	0.00	0.00	
14,787.9	90.00	185.00	7,130.0	-7,762.8	321.5	7,762.8	0.00	0.00	TD at 14787.9 - Vogl-McCoy 2C-5H-E267 PBHl

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
Vogl-McCoy 2C-5H-E26 - plan hits target center - Point	0.00	0.00	7,130.0	-7,762.8	321.5	1,296,882.58	3,161,825.61	40.146880	-104.921140
Interp @ 7130.0 (Vogl-M - plan hits target center - Point	0.00	0.00	7,130.0	-852.5	415.5	1,303,793.30	3,161,874.60	40.165850	-104.920803

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
7,470.6	7,130.0	7"	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
266.0	266.0	Fox Hills - BASE			
4,136.3	4,131.0	Sussex			
4,427.8	4,422.0	Sussex Marker			
4,725.2	4,719.0	Shannon			
6,008.2	6,000.0	Teepee Buttes (*if present)			
7,059.0	6,991.0	Sharon Springs			
7,225.7	7,080.0	Niobrara			
7,359.7	7,120.0	B Chalk			

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
500.0	500.0	0.0	0.0	KOP @ 500'
819.6	819.4	3.1	8.3	EOB; Inc=3.2°
6,558.2	6,549.1	114.9	308.1	Start build/turn @ 6558' MD
7,467.0	7,130.0	-453.8	384.1	LP @ 7130' TVD; 90°
7,867.0	7,130.0	-852.5	415.5	Start turn @ 7867' MD
8,167.0	7,130.0	-1,152.1	431.2	End of turn @ 8167' MD
11,967.0	7,130.0	-4,950.8	530.7	Start turn @ 11967' MD
12,617.3	7,130.0	-5,600.5	510.8	End of turn @ 12617' MD
14,787.9	7,130.0	-7,762.8	321.5	TD at 14787.9

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S5-T2N-R67W (Vogl-McCoy)
Vogl-McCoy 2C-5H-E267
Hz
Plan #1

Anticollision Report

22 May, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference	Plan #1

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

Survey Tool Program **Date** 5/22/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	14,787.7	Plan #1 (Hz)	MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S5-T2N-R67W (Vogl-McCoy)						
ALFRED SATER UNIT 2 (EXISTING) - KMG WELL - NO						Out of range
CHENG 3-8A (EXISTING) - KMG WELL - SURVEYS						Out of range
DIER 13-8 (EXISTING) - ENCANA WELL - Plan #1	13,494.1	7,186.0	164.9	41.0	1.331	Level 3, CC, ES, SF
DIER 13-8 (EXISTING) - ENCANA WELL - SURVEYS	13,500.0	7,194.1	190.8	64.4	1.510	ES, SF
DIER 13-8 (EXISTING) - ENCANA WELL - SURVEYS	13,505.6	7,192.3	190.7	64.4	1.510	CC
DIER 14-8 (EXISTING) - ENCANA WELL - Plan #1	14,479.5	7,325.1	225.3	75.4	1.502	CC
DIER 14-8 (EXISTING) - ENCANA WELL - Plan #1	14,500.0	7,333.5	226.1	75.2	1.499	Level 3, ES, SF
DIER 14-8 (EXISTING) - ENCANA WELL - Plan #2	14,661.3	7,380.2	271.1	114.8	1.734	CC, ES, SF
DIER 14-8 (EXISTING) - ENCANA WELL - SURVEYS	14,642.3	7,344.1	271.8	116.2	1.746	CC, ES, SF
DIER 23-8 (EXISTING) - ENCANA WELL - Plan #1						Out of range
DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 24-8 (EXISTING) - ENCANA WELL - Plan #1						Out of range
DIER 24-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 4-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
GEIST 0-2-32 (EXISTING) - ENCANA WELL - NO SURV						Out of range
GEIST 11-32 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
GEIST 12-32 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
GEIST 2-0-32 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
GEIST 21-32 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
GEIST 22-32 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
GEIST 2-4-32 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
GEIST 4-2-32 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
GEIST A UNIT #1 (EXISTING) - ENCANA WELL - SURV						Out of range
MCCOY #1 (EXISTING) - ENCANA WELL - NO SURVEY	7,333.7	7,127.6	89.7	62.9	3.346	CC, ES, SF
MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURV	7,696.6	7,222.0	72.6	41.4	2.329	CC, ES
MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURV	7,700.0	7,222.0	72.7	41.4	2.328	SF
MCCOY 13-5 (EXISTING) - ENCANA WELL - NO SURV	7,712.4	7,121.0	67.7	36.4	2.168	CC, ES, SF
MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURV	9,367.1	7,133.0	358.5	301.3	6.265	CC, ES
MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURV	9,400.0	7,133.0	360.0	302.2	6.231	SF
MCCOY 23-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 24-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - Plan #1						Out of range
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
McCoy 3A-5H - Hz - Plan #1	14,787.9	14,509.6	478.2	213.9	1.810	CC, ES, SF
McCoy 3B-5H - Hz - Plan #1	12,116.9	11,837.9	297.8	125.3	1.727	CC
McCoy 3B-5H - Hz - Plan #1	12,300.0	12,021.0	300.7	122.5	1.688	ES
McCoy 3B-5H - Hz - Plan #1	12,400.0	12,120.9	304.8	123.6	1.682	SF
NELSON 23-32 (EXISTING) - ENCANA WELL - NO SUR						Out of range
NELSON 4-32 (EXISTING) - ENCANA WELL - NO SURV						Out of range
NELSON 4-6-32 (EXISTING) - ENCANA WELL - PLAN O						Out of range
OWNES BROTHERS 13-32 (EXISTING) - ENCANA WE						Out of range
PROMINENCE 4-8 (EXISTING) - KMG WELL - NO SUR	10,737.0	7,154.0	344.9	264.2	4.273	CC, ES, SF
ROBERT NELSON 14-32 (EXISTING) - ENCANA WELL						Out of range
ROBERT NELSON 24-32 (EXISTING) - ENCANA WELL						Out of range
ROBERT NELSON 2-8-32 (EXISTING) - ENCANA WELL						Out of range
VOGL 21-5X (EXISTING) - KMG WELL - NO SURVEYS						Out of range
VOGL 31-5 (EXISTING) - KMG WELL - NO SURVEYS						Out of range
VOGL 4-5A (EXISTING) - KMG WELL - NO SURVEYS						Out of range
VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS	4,586.8	4,554.8	171.1	154.3	10.188	CC
VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS	4,800.0	4,767.6	171.5	153.9	9.752	ES
VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS	6,500.0	6,465.0	201.6	178.0	8.551	SF
VOGL 5-8A (EXISTING) - KMG WELL - NO SURVEYS	12,072.0	7,164.0	188.4	84.6	1.816	CC, ES, SF
Vogl-Geist 2A-5H-E267 - Hz - Plan #1	400.0	400.0	30.7	29.4	23.802	CC, ES

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S5-T2N-R67W (Vogl-McCoy)						
Vogl-Geist 2A-5H-E267 - Hz - Plan #1	700.0	699.3	38.5	36.1	16.375	SF
Vogl-Geist 2B-5H-E267 - Hz - Plan #1	500.0	500.0	11.2	9.5	6.814	CC, ES
Vogl-Geist 2B-5H-E267 - Hz - Plan #1	7,019.9	7,035.3	91.9	67.3	3.744	SF
Vogl-Geist 2C-5H-E267 - Hz - Plan #1	300.0	300.0	8.4	7.4	8.896	CC, ES
Vogl-Geist 2C-5H-E267 - Hz - Plan #1	400.0	399.9	9.2	7.9	7.131	SF
Vogl-Geist 2D-5H-F267 - Hz - Plan #1						Out of range
Vogl-Geist 2E-5H-F267 - Hz - Plan #1						Out of range
Vogl-Geist 2F-5H-F267 - Hz - Plan #1						Out of range
Vogl-McCoy 2A-5H-E267 - Hz - Plan #1	200.0	199.0	39.1	38.5	66.126	CC, ES
Vogl-McCoy 2A-5H-E267 - Hz - Plan #1	700.0	696.4	58.1	55.7	24.721	SF
Vogl-McCoy 2B-5H-E267 - Hz - Plan #1	500.0	499.0	19.6	17.9	11.937	CC, ES
Vogl-McCoy 2B-5H-E267 - Hz - Plan #1	14,787.9	15,117.3	390.5	156.5	1.669	SF
Vogl-McCoy 2D-5H-E267 - Hz - Plan #1	200.0	200.0	19.6	19.0	32.966	CC, ES
Vogl-McCoy 2D-5H-E267 - Hz - Plan #1	14,787.9	15,135.9	392.4	158.7	1.679	SF
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	12,186.5	12,350.3	483.8	298.0	2.604	CC
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	12,400.0	12,563.7	487.8	294.5	2.523	ES
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	12,600.0	12,763.4	498.7	298.6	2.492	SF
Vogl-McCoy 2F-5H-F267 - Hz - Plan #1						Out of range
Vogl-McCoy 2G-5H-F267 - Hz - Plan #1						Out of range
Vogl-McCoy 2H-5H-F267 - Hz - Plan #1						Out of range
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - SURVE						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - DIER 13-8 (EXISTING) - ENCANA WELL - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,000.0	7,130.0	7,355.2	7,300.8	107.6	14.0	119.10	-6,398.0	240.3	491.8	386.0	105.82	4.648	
13,100.0	7,130.0	7,323.2	7,271.7	109.4	13.9	113.14	-6,409.6	246.9	404.6	292.2	112.41	3.600	
13,200.0	7,130.0	7,288.3	7,240.1	111.1	13.7	105.39	-6,422.4	254.1	321.3	202.3	119.01	2.700	
13,300.0	7,130.0	7,253.5	7,208.6	112.8	13.6	96.20	-6,435.2	261.4	245.6	121.5	124.07	1.980	
13,400.0	7,130.0	7,218.7	7,177.0	114.5	13.4	85.74	-6,448.0	268.7	187.1	61.0	126.05	1.484	Level 3
13,494.1	7,130.0	7,186.0	7,147.4	116.2	13.3	75.19	-6,460.1	275.5	164.9	41.0	123.94	1.331	Level 3, CC, ES, SF
13,500.0	7,130.0	7,183.9	7,145.5	116.3	13.3	74.52	-6,460.8	275.9	165.0	41.4	123.66	1.334	Level 3
13,600.0	7,130.0	7,149.1	7,113.9	118.0	13.1	63.36	-6,473.6	283.2	192.5	75.7	116.78	1.648	
13,700.0	7,130.0	7,114.3	7,082.4	119.7	13.0	53.03	-6,486.4	290.4	253.9	147.2	106.68	2.380	
13,800.0	7,130.0	7,079.5	7,050.8	121.5	12.9	44.01	-6,499.2	297.7	330.8	235.5	95.25	3.473	
13,900.0	7,130.0	7,046.2	7,020.7	123.2	12.7	36.72	-6,511.4	304.6	414.7	330.1	84.57	4.904	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - DIER 13-8 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 690-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,100.0	7,130.0	7,336.8	7,291.7	109.4	13.8	115.76	-6,418.4	226.7	427.4	317.2	110.14	3.880	
13,200.0	7,130.0	7,295.7	7,253.9	111.1	13.7	107.45	-6,433.6	232.4	346.1	228.4	117.69	2.941	
13,300.0	7,130.0	7,259.9	7,220.7	112.8	13.5	98.91	-6,446.2	237.2	272.5	149.3	123.19	2.212	
13,400.0	7,130.0	7,226.2	7,189.3	114.5	13.4	89.95	-6,457.7	241.6	215.4	89.1	126.24	1.706	
13,500.0	7,130.0	7,194.1	7,159.4	116.3	13.3	80.93	-6,468.4	245.7	190.8	64.4	126.40	1.510	ES, SF
13,505.6	7,130.0	7,192.3	7,157.7	116.4	13.3	80.41	-6,469.0	246.0	190.7	64.4	126.32	1.510	CC
13,600.0	7,130.0	7,161.0	7,128.5	118.0	13.1	71.59	-6,479.5	250.0	210.6	87.2	123.35	1.707	
13,700.0	7,130.0	7,122.5	7,092.9	119.7	13.0	61.38	-6,493.2	254.9	264.4	148.2	116.22	2.275	
13,800.0	7,130.0	7,081.5	7,055.2	121.5	12.9	51.77	-6,508.8	260.2	335.6	229.3	106.29	3.157	
13,900.0	7,130.0	7,049.2	7,025.7	123.2	12.8	45.26	-6,521.1	264.3	415.4	317.1	98.27	4.227	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - DIER 14-8 (EXISTING) - ENCANA WELL - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,000.0	7,130.0	7,128.9	6,985.0	124.9	17.9	44.85	-7,358.0	153.2	492.2	390.0	102.22	4.815	
14,100.0	7,130.0	7,169.8	7,022.1	126.7	18.1	51.16	-7,374.3	147.4	413.2	299.8	113.45	3.642	
14,200.0	7,130.0	7,210.7	7,059.1	128.4	18.4	58.47	-7,390.6	141.6	340.4	215.3	125.03	2.722	
14,300.0	7,130.0	7,251.6	7,096.2	130.1	18.7	66.75	-7,406.9	135.8	278.6	142.6	135.99	2.049	
14,400.0	7,130.0	7,292.5	7,133.3	131.9	19.0	75.81	-7,423.2	130.0	236.7	91.7	145.01	1.633	
14,479.5	7,130.0	7,325.1	7,162.8	133.3	19.2	83.32	-7,436.1	125.4	225.3	75.4	149.96	1.502	CC
14,500.0	7,130.0	7,333.5	7,170.4	133.6	19.2	85.26	-7,439.5	124.3	226.1	75.2	150.86	1.499	Level 3, ES, SF
14,600.0	7,130.0	7,373.8	7,207.0	135.3	19.5	94.51	-7,455.4	118.6	250.7	97.8	152.90	1.640	
14,700.0	7,130.0	7,412.0	7,241.9	137.1	19.7	102.80	-7,470.0	113.4	302.4	150.8	151.66	1.994	
14,787.9	7,130.0	7,443.7	7,271.0	138.6	19.9	109.16	-7,481.8	109.2	361.6	212.8	148.78	2.430	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - DIER 14-8 (EXISTING) - ENCANA WELL - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,300.0	7,130.0	7,322.7	7,122.1	130.1	21.4	76.02	-7,604.7	65.6	448.4	302.7	145.73	3.077	
14,400.0	7,130.0	7,339.8	7,138.9	131.9	21.5	79.47	-7,607.2	64.7	374.5	225.2	149.33	2.508	
14,500.0	7,130.0	7,355.9	7,154.9	133.6	21.5	82.80	-7,609.6	63.8	314.6	162.2	152.41	2.064	
14,600.0	7,130.0	7,371.2	7,170.0	135.3	21.6	85.99	-7,611.8	63.1	277.8	122.8	154.99	1.792	
14,661.3	7,130.0	7,380.2	7,178.9	136.4	21.6	87.87	-7,613.0	62.6	271.1	114.8	156.35	1.734	CC, ES, SF
14,700.0	7,130.0	7,385.8	7,184.4	137.1	21.6	89.03	-7,613.8	62.4	273.8	116.7	157.13	1.743	
14,787.9	7,130.0	7,398.0	7,196.5	138.6	21.7	91.57	-7,615.4	61.8	298.7	140.0	158.66	1.883	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - DIER 14-8 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 735-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,300.0	7,130.0	7,298.4	7,139.0	130.1	21.0	79.54	-7,588.6	64.9	435.0	287.9	147.18	2.956	
14,400.0	7,130.0	7,312.7	7,153.1	131.9	21.1	82.46	-7,590.4	64.4	362.9	212.8	150.09	2.418	
14,500.0	7,130.0	7,325.9	7,166.3	133.6	21.1	85.21	-7,592.0	64.0	306.3	153.7	152.61	2.007	
14,600.0	7,130.0	7,338.8	7,179.1	135.3	21.2	87.91	-7,593.5	63.6	275.0	120.2	154.81	1.777	
14,642.3	7,130.0	7,344.1	7,184.3	136.1	21.2	89.01	-7,594.1	63.4	271.8	116.2	155.64	1.746	CC, ES, SF
14,700.0	7,130.0	7,351.1	7,191.2	137.1	21.2	90.47	-7,594.9	63.3	277.8	121.1	156.68	1.773	
14,787.9	7,130.0	7,361.3	7,201.4	138.6	21.2	92.60	-7,596.0	63.0	307.9	149.8	158.10	1.947	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY #1 (EXISTING) - ENCANA WELL - NO SURVEYS

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
2,800.0	2,796.8	2,809.8	2,809.8	5.3	4.9	65.91	-314.0	462.2	499.3	489.2	10.10	49.451	
2,900.0	2,896.6	2,909.6	2,909.6	5.5	5.1	66.50	-314.0	462.2	497.1	486.6	10.47	47.475	
3,000.0	2,996.4	3,009.4	3,009.4	5.7	5.2	67.09	-314.0	462.2	494.9	484.0	10.84	45.638	
3,100.0	3,096.3	3,109.3	3,109.3	5.9	5.4	67.68	-314.0	462.2	492.7	481.5	11.22	43.926	
3,200.0	3,196.1	3,209.1	3,209.1	6.1	5.6	68.29	-314.0	462.2	490.6	479.0	11.59	42.329	
3,300.0	3,296.0	3,309.0	3,309.0	6.3	5.8	68.89	-314.0	462.2	488.6	476.6	11.97	40.834	
3,400.0	3,395.8	3,408.8	3,408.8	6.5	5.9	69.50	-314.0	462.2	486.6	474.3	12.34	39.434	
3,500.0	3,495.7	3,508.7	3,508.7	6.7	6.1	70.12	-314.0	462.2	484.7	472.0	12.71	38.120	
3,600.0	3,595.5	3,608.5	3,608.5	6.9	6.3	70.74	-314.0	462.2	482.8	469.7	13.09	36.885	
3,700.0	3,695.4	3,708.4	3,708.4	7.1	6.5	71.37	-314.0	462.2	481.0	467.5	13.47	35.722	
3,800.0	3,795.2	3,808.2	3,808.2	7.3	6.6	72.00	-314.0	462.2	479.2	465.4	13.84	34.625	
3,900.0	3,895.0	3,908.0	3,908.0	7.5	6.8	72.63	-314.0	462.2	477.6	463.3	14.22	33.590	
4,000.0	3,994.9	4,007.9	4,007.9	7.7	7.0	73.27	-314.0	462.2	475.9	461.3	14.59	32.612	
4,100.0	4,094.7	4,107.7	4,107.7	7.9	7.2	73.92	-314.0	462.2	474.3	459.4	14.97	31.687	
4,200.0	4,194.6	4,207.6	4,207.6	8.1	7.3	74.57	-314.0	462.2	472.8	457.5	15.35	30.811	
4,300.0	4,294.4	4,307.4	4,307.4	8.3	7.5	75.22	-314.0	462.2	471.4	455.6	15.72	29.980	
4,400.0	4,394.3	4,407.3	4,407.3	8.5	7.7	75.87	-314.0	462.2	470.0	453.9	16.10	29.192	
4,500.0	4,494.1	4,507.1	4,507.1	8.7	7.8	76.53	-314.0	462.2	468.6	452.2	16.48	28.444	
4,600.0	4,594.0	4,607.0	4,607.0	8.9	8.0	77.20	-314.0	462.2	467.4	450.5	16.85	27.732	
4,700.0	4,693.8	4,706.8	4,706.8	9.1	8.2	77.86	-314.0	462.2	466.2	448.9	17.23	27.056	
4,800.0	4,793.6	4,806.6	4,806.6	9.3	8.4	78.54	-314.0	462.2	465.0	447.4	17.61	26.411	
4,900.0	4,893.5	4,906.5	4,906.5	9.5	8.5	79.21	-314.0	462.2	463.9	446.0	17.98	25.798	
5,000.0	4,993.3	5,006.3	5,006.3	9.7	8.7	79.89	-314.0	462.2	462.9	444.6	18.36	25.213	
5,100.0	5,093.2	5,106.2	5,106.2	9.9	8.9	80.57	-314.0	462.2	462.0	443.2	18.74	24.655	
5,200.0	5,193.0	5,206.0	5,206.0	10.1	9.1	81.25	-314.0	462.2	461.1	442.0	19.12	24.122	
5,300.0	5,292.9	5,305.9	5,305.9	10.3	9.2	81.93	-314.0	462.2	460.3	440.8	19.49	23.614	
5,400.0	5,392.7	5,405.7	5,405.7	10.5	9.4	82.62	-314.0	462.2	459.5	439.7	19.87	23.128	
5,500.0	5,492.6	5,505.6	5,505.6	10.7	9.6	83.31	-314.0	462.2	458.9	438.6	20.25	22.664	
5,600.0	5,592.4	5,605.4	5,605.4	10.9	9.8	84.00	-314.0	462.2	458.2	437.6	20.62	22.221	
5,700.0	5,692.2	5,705.2	5,705.2	11.1	9.9	84.69	-314.0	462.2	457.7	436.7	21.00	21.796	
5,800.0	5,792.1	5,805.1	5,805.1	11.3	10.1	85.39	-314.0	462.2	457.2	435.8	21.37	21.390	
5,900.0	5,891.9	5,904.9	5,904.9	11.5	10.3	86.08	-314.0	462.2	456.8	435.0	21.75	21.001	
6,000.0	5,991.8	6,004.8	6,004.8	11.7	10.5	86.78	-314.0	462.2	456.4	434.3	22.13	20.629	
6,100.0	6,091.6	6,104.6	6,104.6	11.9	10.6	87.48	-314.0	462.2	456.2	433.7	22.50	20.272	
6,200.0	6,191.5	6,204.5	6,204.5	12.1	10.8	88.18	-314.0	462.2	456.0	433.1	22.88	19.931	
6,300.0	6,291.3	6,304.3	6,304.3	12.3	11.0	88.88	-314.0	462.2	455.8	432.6	23.25	19.603	
6,400.0	6,391.2	6,404.2	6,404.2	12.5	11.2	89.58	-314.0	462.2	455.7	432.1	23.63	19.290	
6,460.6	6,451.7	6,464.7	6,464.7	12.6	11.3	90.00	-314.0	462.2	455.7	431.9	23.85	19.106	
6,500.0	6,491.0	6,504.0	6,504.0	12.7	11.3	90.28	-314.0	462.2	455.7	431.7	24.00	18.989	
6,600.0	6,590.8	6,603.8	6,603.8	12.9	11.5	27.93	-314.0	462.2	454.3	430.0	24.33	18.677	
6,700.0	6,689.5	6,702.5	6,702.5	13.0	11.7	-2.13	-314.0	462.2	439.0	414.8	24.21	18.133	
6,800.0	6,784.2	6,797.2	6,797.2	13.2	11.8	-8.92	-314.0	462.2	407.4	383.8	23.59	17.270	
6,900.0	6,872.0	6,885.0	6,885.0	13.4	12.0	-14.15	-314.0	462.2	360.6	338.0	22.55	15.988	
7,000.0	6,950.3	6,963.3	6,963.3	13.6	12.1	-21.39	-314.0	462.2	300.3	279.0	21.38	14.050	
7,100.0	7,016.6	7,029.6	7,029.6	14.0	12.3	-34.27	-314.0	462.2	229.7	208.7	20.99	10.944	
7,200.0	7,069.0	7,082.0	7,082.0	14.6	12.3	-57.38	-314.0	462.2	154.6	131.3	23.30	6.635	
7,300.0	7,105.9	7,118.9	7,118.9	15.3	12.4	-84.00	-314.0	462.2	95.5	69.1	26.34	3.624	
7,333.7	7,114.6	7,127.6	7,127.6	15.6	12.4	-90.00	-314.0	462.2	89.7	62.9	26.81	3.346	CC, ES, SF
7,400.0	7,126.1	7,139.1	7,139.1	16.2	12.4	-94.90	-314.0	462.2	111.1	83.7	27.39	4.057	
7,500.0	7,130.0	7,143.0	7,143.0	17.2	12.4	-90.00	-314.0	462.2	188.5	160.0	28.55	6.603	
7,600.0	7,130.0	7,143.0	7,143.0	18.4	12.4	-90.00	-314.0	462.2	280.7	250.9	29.77	9.429	
7,700.0	7,130.0	7,143.0	7,143.0	19.6	12.4	-90.00	-314.0	462.2	376.9	345.8	31.08	12.128	

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY #1 (EXISTING) - ENCANA WELL - NO SURVEYS

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
7,800.0	7,130.0	7,143.0	7,143.0	20.9	12.4	-90.00	-314.0	462.2	474.7	442.2	32.45	14.626	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURVEYS

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
7,200.0	7,069.0	7,161.0	7,161.0	14.6	12.5	20.74	-688.5	329.8	492.0	472.9	19.17	25.660	
7,300.0	7,105.9	7,197.9	7,197.9	15.3	12.5	34.54	-688.5	329.8	400.7	380.3	20.43	19.618	
7,400.0	7,126.1	7,218.1	7,218.1	16.2	12.6	65.09	-688.5	329.8	305.2	279.4	25.86	11.802	
7,500.0	7,130.0	7,222.0	7,222.0	17.2	12.6	90.00	-688.5	329.8	209.6	181.0	28.69	7.307	
7,600.0	7,130.0	7,222.0	7,222.0	18.4	12.6	90.00	-688.5	329.8	120.9	91.0	29.91	4.042	
7,696.6	7,130.0	7,222.0	7,222.0	19.6	12.6	90.00	-688.5	329.8	72.6	41.4	31.17	2.329	CC, ES
7,700.0	7,130.0	7,222.0	7,222.0	19.6	12.6	90.00	-688.5	329.8	72.7	41.4	31.21	2.328	SF
7,800.0	7,130.0	7,222.0	7,222.0	20.9	12.6	90.00	-688.5	329.8	126.3	93.7	32.59	3.875	
7,900.0	7,130.0	7,222.0	7,222.0	22.3	12.6	90.00	-688.5	329.8	215.9	181.9	33.99	6.350	
8,000.0	7,130.0	7,222.0	7,222.0	23.7	12.6	90.00	-688.5	329.8	311.5	276.1	35.38	8.805	
8,100.0	7,130.0	7,222.0	7,222.0	25.1	12.6	90.00	-688.5	329.8	408.9	372.1	36.79	11.114	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 13-5 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 7908-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,300.0	7,105.9	7,096.9	7,096.9	15.3	12.4	31.87	-703.8	335.9	415.4	395.6	19.82	20.960	
7,400.0	7,126.1	7,117.1	7,117.1	16.2	12.4	62.38	-703.8	335.9	319.5	294.1	25.32	12.617	
7,500.0	7,130.0	7,121.0	7,121.0	17.2	12.4	90.00	-703.8	335.9	222.9	194.4	28.51	7.818	
7,600.0	7,130.0	7,121.0	7,121.0	18.4	12.4	90.00	-703.8	335.9	131.2	101.5	29.73	4.412	
7,700.0	7,130.0	7,121.0	7,121.0	19.6	12.4	90.00	-703.8	335.9	68.8	37.7	31.04	2.216	
7,712.4	7,130.0	7,121.0	7,121.0	19.8	12.4	90.00	-703.8	335.9	67.7	36.4	31.21	2.168	CC, ES, SF
7,800.0	7,130.0	7,121.0	7,121.0	20.9	12.4	90.00	-703.8	335.9	110.7	78.3	32.42	3.414	
7,900.0	7,130.0	7,121.0	7,121.0	22.3	12.4	90.00	-703.8	335.9	199.4	165.6	33.82	5.895	
8,000.0	7,130.0	7,121.0	7,121.0	23.7	12.4	90.00	-703.8	335.9	295.1	259.9	35.21	8.382	
8,100.0	7,130.0	7,121.0	7,121.0	25.1	12.4	90.00	-703.8	335.9	392.6	356.0	36.62	10.722	
8,200.0	7,130.0	7,121.0	7,121.0	26.6	12.4	90.00	-703.8	335.9	490.9	452.8	38.09	12.888	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 7950-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
9,100.0	7,130.0	7,133.0	7,133.0	40.9	12.4	90.00	-2,361.3	104.2	447.1	394.4	52.73	8.479	
9,200.0	7,130.0	7,133.0	7,133.0	42.6	12.4	90.00	-2,361.3	104.2	395.5	341.1	54.40	7.271	
9,300.0	7,130.0	7,133.0	7,133.0	44.2	12.4	90.00	-2,361.3	104.2	364.7	308.6	56.09	6.503	
9,367.1	7,130.0	7,133.0	7,133.0	45.3	12.4	90.00	-2,361.3	104.2	358.5	301.3	57.22	6.265	CC, ES
9,400.0	7,130.0	7,133.0	7,133.0	45.9	12.4	90.00	-2,361.3	104.2	360.0	302.2	57.77	6.231	SF
9,500.0	7,130.0	7,133.0	7,133.0	47.6	12.4	90.00	-2,361.3	104.2	382.3	322.8	59.47	6.429	
9,600.0	7,130.0	7,133.0	7,133.0	49.2	12.4	90.00	-2,361.3	104.2	427.5	366.3	61.17	6.989	
9,700.0	7,130.0	7,133.0	7,133.0	50.9	12.4	90.00	-2,361.3	104.2	489.2	426.3	62.87	7.781	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - McCoy 3A-5H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
6,200.0	6,191.5	6,330.7	6,255.8	12.1	13.9	140.03	-321.4	48.2	497.4	472.6	24.81	20.048	
6,300.0	6,291.3	6,423.6	6,342.7	12.3	14.3	143.96	-295.7	27.9	488.8	463.3	25.48	19.184	
6,400.0	6,391.2	6,509.5	6,423.1	12.5	14.8	147.68	-272.1	9.2	483.0	456.9	26.12	18.491	
6,439.5	6,430.6	6,535.5	6,447.6	12.5	14.9	148.78	-265.4	3.5	482.2	455.9	26.32	18.320	
6,500.0	6,491.0	6,569.7	6,480.3	12.7	15.1	150.11	-258.5	-4.1	483.9	457.4	26.58	18.204	
6,600.0	6,590.8	6,627.6	6,536.1	12.9	15.3	88.80	-251.4	-17.1	493.2	466.2	27.00	18.267	
14,600.0	7,130.0	14,322.4	7,135.0	135.3	123.6	91.28	-7,575.6	-156.6	494.5	236.8	257.70	1.919	
14,700.0	7,130.0	14,422.0	7,135.0	137.1	125.3	91.30	-7,675.2	-156.5	485.8	224.6	261.18	1.860	
14,787.9	7,130.0	14,509.6	7,135.0	138.6	126.8	91.32	-7,762.8	-156.5	478.2	213.9	264.24	1.810	CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - McCoy 3B-5H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,100.0	7,016.6	6,919.0	6,815.0	14.0	15.5	-51.14	-311.0	751.9	487.5	462.8	24.67	19.758	
7,200.0	7,069.0	6,984.0	6,870.5	14.6	15.5	-56.66	-342.0	765.5	470.6	445.9	24.71	19.044	
7,300.0	7,105.9	7,050.0	6,922.9	15.3	15.5	-62.71	-379.9	778.4	453.8	428.3	25.47	17.814	
7,400.0	7,126.1	7,122.1	6,974.9	16.2	15.5	-69.55	-428.1	791.1	438.8	412.0	26.85	16.343	
7,500.0	7,130.0	7,197.6	7,022.7	17.2	15.4	-76.41	-485.4	802.9	428.1	399.6	28.44	15.052	
7,600.0	7,130.0	7,287.3	7,069.3	18.4	15.5	-82.72	-561.0	814.3	423.9	394.0	29.97	14.145	
7,700.0	7,130.0	7,393.7	7,108.9	19.6	15.7	-88.09	-659.1	824.0	422.7	391.2	31.56	13.394	
7,800.0	7,130.0	7,512.7	7,131.6	20.9	16.1	-91.17	-775.6	829.6	419.5	386.1	33.44	12.546	
7,900.0	7,130.0	7,622.7	7,134.0	22.3	16.6	-91.53	-885.5	830.2	412.3	376.7	35.58	11.588	
8,000.0	7,130.0	7,722.5	7,134.0	23.7	17.3	-91.56	-985.3	830.2	405.9	368.2	37.76	10.750	
8,100.0	7,130.0	7,822.4	7,134.0	25.1	18.1	-91.57	-1,085.2	830.2	401.3	361.2	40.09	10.010	
8,200.0	7,130.0	7,922.3	7,134.0	26.6	19.0	-91.58	-1,185.1	830.2	398.3	355.7	42.60	9.348	
8,300.0	7,130.0	8,022.3	7,134.0	28.1	20.1	-91.59	-1,285.1	830.2	395.7	350.3	45.37	8.721	
8,400.0	7,130.0	8,122.2	7,134.0	29.7	21.2	-91.60	-1,385.0	830.2	393.0	344.8	48.23	8.149	
8,500.0	7,130.0	8,222.2	7,134.0	31.2	22.5	-91.62	-1,485.0	830.2	390.4	339.2	51.19	7.627	
8,600.0	7,130.0	8,322.2	7,134.0	32.8	23.8	-91.63	-1,585.0	830.2	387.8	333.6	54.22	7.153	
8,700.0	7,130.0	8,422.1	7,134.0	34.4	25.1	-91.64	-1,684.9	830.2	385.2	327.9	57.30	6.722	
8,800.0	7,130.0	8,522.1	7,134.0	36.0	26.5	-91.65	-1,784.9	830.2	382.6	322.1	60.44	6.330	
8,900.0	7,130.0	8,622.1	7,134.0	37.6	27.9	-91.66	-1,884.9	830.2	380.0	316.3	63.62	5.973	
9,000.0	7,130.0	8,722.0	7,134.0	39.3	29.4	-91.67	-1,984.8	830.2	377.3	310.5	66.83	5.646	
9,100.0	7,130.0	8,822.0	7,134.0	40.9	30.9	-91.68	-2,084.8	830.2	374.7	304.7	70.07	5.348	
9,200.0	7,130.0	8,922.0	7,134.0	42.6	32.4	-91.69	-2,184.8	830.2	372.1	298.8	73.34	5.074	
9,300.0	7,130.0	9,021.9	7,134.0	44.2	34.0	-91.71	-2,284.7	830.2	369.5	292.9	76.63	4.822	
9,400.0	7,130.0	9,121.9	7,134.0	45.9	35.6	-91.72	-2,384.7	830.2	366.9	286.9	79.94	4.589	
9,500.0	7,130.0	9,221.9	7,134.0	47.6	37.2	-91.73	-2,484.7	830.2	364.3	281.0	83.27	4.374	
9,600.0	7,130.0	9,321.8	7,134.0	49.2	38.8	-91.74	-2,584.6	830.2	361.7	275.0	86.61	4.175	
9,700.0	7,130.0	9,421.8	7,134.0	50.9	40.4	-91.76	-2,684.6	830.2	359.0	269.1	89.97	3.991	
9,800.0	7,130.0	9,521.8	7,134.0	52.6	42.0	-91.77	-2,784.6	830.2	356.4	263.1	93.33	3.819	
9,900.0	7,130.0	9,621.7	7,134.0	54.3	43.6	-91.78	-2,884.5	830.2	353.8	257.1	96.71	3.658	
10,000.0	7,130.0	9,721.7	7,134.0	56.0	45.3	-91.80	-2,984.5	830.2	351.2	251.1	100.10	3.509	
10,100.0	7,130.0	9,821.7	7,134.0	57.7	46.9	-91.81	-3,084.5	830.2	348.6	245.1	103.49	3.368	
10,200.0	7,130.0	9,921.6	7,134.0	59.4	48.6	-91.82	-3,184.4	830.2	346.0	239.1	106.89	3.237	
10,300.0	7,130.0	10,021.6	7,134.0	61.1	50.2	-91.84	-3,284.4	830.2	343.3	233.0	110.30	3.113	
10,400.0	7,130.0	10,121.6	7,134.0	62.8	51.9	-91.85	-3,384.4	830.2	340.7	227.0	113.71	2.996	
10,500.0	7,130.0	10,221.5	7,134.0	64.5	53.6	-91.86	-3,484.3	830.2	338.1	221.0	117.13	2.887	
10,600.0	7,130.0	10,321.5	7,134.0	66.2	55.3	-91.88	-3,584.3	830.2	335.5	214.9	120.56	2.783	
10,700.0	7,130.0	10,421.5	7,134.0	68.0	56.9	-91.89	-3,684.3	830.2	332.9	208.9	123.99	2.685	
10,800.0	7,130.0	10,521.4	7,134.0	69.7	58.6	-91.91	-3,784.2	830.2	330.3	202.9	127.42	2.592	
10,900.0	7,130.0	10,621.4	7,134.0	71.4	60.3	-91.92	-3,884.2	830.2	327.7	196.8	130.86	2.504	
11,000.0	7,130.0	10,721.4	7,134.0	73.1	62.0	-91.94	-3,984.1	830.2	325.0	190.7	134.30	2.420	
11,100.0	7,130.0	10,821.3	7,134.0	74.8	63.7	-91.96	-4,084.1	830.2	322.4	184.7	137.74	2.341	
11,200.0	7,130.0	10,921.3	7,134.0	76.6	65.4	-91.97	-4,184.1	830.2	319.8	178.6	141.19	2.265	
11,300.0	7,130.0	11,021.3	7,134.0	78.3	67.1	-91.99	-4,284.0	830.2	317.2	172.6	144.64	2.193	
11,400.0	7,130.0	11,121.2	7,134.0	80.0	68.8	-92.00	-4,384.0	830.2	314.6	166.5	148.09	2.124	
11,500.0	7,130.0	11,221.2	7,134.0	81.8	70.5	-92.02	-4,484.0	830.2	312.0	160.4	151.54	2.059	
11,600.0	7,130.0	11,321.2	7,134.0	83.5	72.3	-92.04	-4,583.9	830.2	309.4	154.4	155.00	1.996	
11,700.0	7,130.0	11,421.1	7,134.0	85.2	74.0	-92.06	-4,683.9	830.2	306.7	148.3	158.46	1.936	
11,800.0	7,130.0	11,521.1	7,134.0	86.9	75.7	-92.07	-4,783.9	830.2	304.1	142.2	161.92	1.878	
11,900.0	7,130.0	11,621.0	7,134.0	88.7	77.4	-92.09	-4,883.8	830.2	301.5	136.1	165.38	1.823	
12,000.0	7,130.0	11,721.0	7,134.0	90.4	79.1	-92.11	-4,983.8	830.2	299.0	130.2	168.76	1.772	
12,100.0	7,130.0	11,821.0	7,134.0	92.1	80.8	-92.12	-5,083.8	830.2	297.8	125.9	171.95	1.732	
12,116.9	7,130.0	11,837.9	7,134.0	92.4	81.1	-92.12	-5,100.7	830.2	297.8	125.3	172.49	1.727	CC

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - McCoy 3B-5H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,200.0	7,130.0	11,921.0	7,134.0	93.9	82.6	-92.11	-5,183.8	830.2	298.4	123.3	175.09	1.704	
12,300.0	7,130.0	12,021.0	7,134.0	95.6	84.3	-92.10	-5,283.8	830.2	300.7	122.5	178.19	1.688	ES
12,400.0	7,130.0	12,120.9	7,134.0	97.3	86.0	-92.07	-5,383.7	830.2	304.8	123.6	181.23	1.682	SF
12,500.0	7,130.0	12,220.7	7,134.0	99.0	87.7	-92.03	-5,483.5	830.2	310.6	126.4	184.22	1.686	
12,600.0	7,130.0	12,320.4	7,134.0	100.8	89.5	-91.99	-5,583.2	830.2	318.1	131.0	187.16	1.700	
12,700.0	7,130.0	12,420.1	7,134.0	102.5	91.2	-91.94	-5,682.9	830.2	326.8	136.3	190.53	1.715	
12,800.0	7,130.0	12,519.7	7,134.0	104.2	92.9	-91.89	-5,782.5	830.2	335.6	141.5	194.00	1.730	
12,900.0	7,130.0	12,619.3	7,134.0	105.9	94.6	-91.84	-5,882.1	830.2	344.3	146.8	197.48	1.743	
13,000.0	7,130.0	12,718.9	7,134.0	107.6	96.3	-91.79	-5,981.7	830.2	353.0	152.0	200.95	1.757	
13,100.0	7,130.0	12,818.5	7,134.0	109.4	98.1	-91.75	-6,081.3	830.2	361.7	157.3	204.43	1.769	
13,200.0	7,130.0	12,918.2	7,134.0	111.1	99.8	-91.71	-6,180.9	830.2	370.4	162.5	207.91	1.782	
13,300.0	7,130.0	13,017.8	7,134.0	112.8	101.5	-91.67	-6,280.6	830.2	379.1	167.8	211.38	1.794	
13,400.0	7,130.0	13,117.4	7,134.0	114.5	103.3	-91.63	-6,380.2	830.2	387.9	173.0	214.86	1.805	
13,500.0	7,130.0	13,217.0	7,134.0	116.3	105.0	-91.60	-6,479.8	830.2	396.6	178.2	218.34	1.816	
13,600.0	7,130.0	13,316.6	7,134.0	118.0	106.7	-91.56	-6,579.4	830.2	405.3	183.5	221.82	1.827	
13,700.0	7,130.0	13,416.2	7,134.0	119.7	108.4	-91.53	-6,679.0	830.3	414.0	188.7	225.30	1.838	
13,800.0	7,130.0	13,515.9	7,134.0	121.5	110.2	-91.50	-6,778.7	830.3	422.7	194.0	228.78	1.848	
13,900.0	7,130.0	13,615.5	7,134.0	123.2	111.9	-91.47	-6,878.3	830.3	431.5	199.2	232.26	1.858	
14,000.0	7,130.0	13,715.1	7,134.0	124.9	113.6	-91.44	-6,977.9	830.3	440.2	204.4	235.74	1.867	
14,100.0	7,130.0	13,814.7	7,134.0	126.7	115.4	-91.41	-7,077.5	830.3	448.9	209.7	239.22	1.877	
14,200.0	7,130.0	13,914.3	7,134.0	128.4	117.1	-91.38	-7,177.1	830.3	457.6	214.9	242.71	1.886	
14,300.0	7,130.0	14,014.0	7,134.0	130.1	118.8	-91.36	-7,276.8	830.3	466.4	220.2	246.19	1.894	
14,400.0	7,130.0	14,113.6	7,134.0	131.9	120.6	-91.33	-7,376.4	830.3	475.1	225.4	249.67	1.903	
14,500.0	7,130.0	14,213.2	7,134.0	133.6	122.3	-91.31	-7,476.0	830.3	483.8	230.6	253.16	1.911	
14,600.0	7,130.0	14,312.8	7,134.0	135.3	124.0	-91.28	-7,575.6	830.3	492.5	235.9	256.64	1.919	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - PROMINENCE 4-8 (EXISTING) - KMG WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,400.0	7,130.0	7,154.0	7,154.0	62.8	12.5	90.00	-3,730.2	153.7	482.1	407.3	74.90	6.438	
10,500.0	7,130.0	7,154.0	7,154.0	64.5	12.5	90.00	-3,730.2	153.7	418.4	341.8	76.62	5.461	
10,600.0	7,130.0	7,154.0	7,154.0	66.2	12.5	90.00	-3,730.2	153.7	371.1	292.7	78.34	4.736	
10,700.0	7,130.0	7,154.0	7,154.0	68.0	12.5	90.00	-3,730.2	153.7	346.8	266.8	80.07	4.332	
10,737.0	7,130.0	7,154.0	7,154.0	68.6	12.5	90.00	-3,730.2	153.7	344.9	264.2	80.70	4.273	CC, ES, SF
10,800.0	7,130.0	7,154.0	7,154.0	69.7	12.5	90.00	-3,730.2	153.7	350.6	268.8	81.79	4.286	
10,900.0	7,130.0	7,154.0	7,154.0	71.4	12.5	90.00	-3,730.2	153.7	381.5	297.9	83.52	4.567	
11,000.0	7,130.0	7,154.0	7,154.0	73.1	12.5	90.00	-3,730.2	153.7	433.7	348.5	85.25	5.088	

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 7910-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	31.53	236.8	145.3	279.1				
100.0	100.0	74.0	74.0	0.1	0.1	31.53	236.8	145.3	277.9	277.6	0.25	1,104.669	
200.0	200.0	174.0	174.0	0.3	0.3	31.53	236.8	145.3	277.9	277.3	0.60	462.634	
300.0	300.0	274.0	274.0	0.5	0.5	31.53	236.8	145.3	277.9	276.9	0.95	292.584	
400.0	400.0	374.0	374.0	0.6	0.7	31.53	236.8	145.3	277.9	276.6	1.30	213.944	
500.0	500.0	474.0	474.0	0.8	0.8	31.53	236.8	145.3	277.9	276.2	1.65	168.622	
600.0	600.0	574.0	574.0	1.0	1.0	-38.13	236.8	145.3	277.2	275.2	2.00	138.799	
700.0	700.0	674.0	674.0	1.2	1.2	-38.48	236.8	145.3	275.1	272.8	2.35	117.233	
800.0	799.9	773.9	773.9	1.4	1.4	-39.07	236.8	145.3	271.7	269.0	2.70	100.692	
900.0	899.7	873.7	873.7	1.5	1.5	-39.82	236.8	145.3	267.4	264.4	3.05	87.604	
1,000.0	999.6	973.6	973.6	1.7	1.7	-40.60	236.8	145.3	263.2	259.8	3.41	77.206	
1,100.0	1,099.4	1,073.4	1,073.4	1.9	1.9	-41.40	236.8	145.3	259.0	255.2	3.77	68.763	
1,200.0	1,199.2	1,173.2	1,173.2	2.1	2.0	-42.23	236.8	145.3	254.8	250.7	4.12	61.778	
1,300.0	1,299.1	1,273.1	1,273.1	2.3	2.2	-43.09	236.8	145.3	250.7	246.2	4.48	55.909	
1,400.0	1,398.9	1,372.9	1,372.9	2.5	2.4	-43.97	236.8	145.3	246.7	241.8	4.84	50.912	
1,500.0	1,498.8	1,472.8	1,472.8	2.7	2.6	-44.88	236.8	145.3	242.7	237.5	5.21	46.609	
1,600.0	1,598.6	1,572.6	1,572.6	2.9	2.7	-45.83	236.8	145.3	238.7	233.2	5.57	42.869	
1,700.0	1,698.5	1,672.5	1,672.5	3.1	2.9	-46.80	236.8	145.3	234.9	229.0	5.93	39.591	
1,800.0	1,798.3	1,772.3	1,772.3	3.3	3.1	-47.81	236.8	145.3	231.1	224.8	6.30	36.696	
1,900.0	1,898.2	1,872.2	1,872.2	3.5	3.3	-48.85	236.8	145.3	227.4	220.7	6.66	34.124	
2,000.0	1,998.0	1,972.0	1,972.0	3.7	3.4	-49.92	236.8	145.3	223.8	216.7	7.03	31.825	
2,100.0	2,097.8	2,071.8	2,071.8	3.9	3.6	-51.03	236.8	145.3	220.2	212.8	7.40	29.762	
2,200.0	2,197.7	2,171.7	2,171.7	4.1	3.8	-52.17	236.8	145.3	216.8	209.0	7.77	27.901	
2,300.0	2,297.5	2,271.5	2,271.5	4.3	4.0	-53.36	236.8	145.3	213.4	205.2	8.14	26.216	
2,400.0	2,397.4	2,371.4	2,371.4	4.5	4.1	-54.57	236.8	145.3	210.1	201.6	8.51	24.685	
2,500.0	2,497.2	2,471.2	2,471.2	4.7	4.3	-55.83	236.8	145.3	206.9	198.0	8.88	23.291	
2,600.0	2,597.1	2,571.1	2,571.1	4.9	4.5	-57.13	236.8	145.3	203.8	194.6	9.26	22.017	
2,700.0	2,696.9	2,670.9	2,670.9	5.1	4.7	-58.46	236.8	145.3	200.8	191.2	9.63	20.851	
2,800.0	2,796.8	2,770.8	2,770.8	5.3	4.8	-59.83	236.8	145.3	198.0	188.0	10.01	19.781	
2,900.0	2,896.6	2,870.6	2,870.6	5.5	5.0	-61.25	236.8	145.3	195.2	184.9	10.39	18.799	
3,000.0	2,996.4	2,970.4	2,970.4	5.7	5.2	-62.70	236.8	145.3	192.6	181.9	10.76	17.895	
3,100.0	3,096.3	3,070.3	3,070.3	5.9	5.4	-64.19	236.8	145.3	190.1	179.0	11.14	17.062	
3,200.0	3,196.1	3,170.1	3,170.1	6.1	5.5	-65.72	236.8	145.3	187.8	176.2	11.52	16.294	
3,300.0	3,296.0	3,270.0	3,270.0	6.3	5.7	-67.29	236.8	145.3	185.5	173.6	11.90	15.586	
3,400.0	3,395.8	3,369.8	3,369.8	6.5	5.9	-68.89	236.8	145.3	183.5	171.2	12.29	14.933	
3,500.0	3,495.7	3,469.7	3,469.7	6.7	6.1	-70.53	236.8	145.3	181.5	168.8	12.67	14.330	
3,600.0	3,595.5	3,569.5	3,569.5	6.9	6.2	-72.20	236.8	145.3	179.7	166.7	13.05	13.774	
3,700.0	3,695.4	3,669.4	3,669.4	7.1	6.4	-73.91	236.8	145.3	178.1	164.7	13.43	13.261	
3,800.0	3,795.2	3,769.2	3,769.2	7.3	6.6	-75.64	236.8	145.3	176.6	162.8	13.81	12.788	
3,900.0	3,895.0	3,869.0	3,869.0	7.5	6.8	-77.41	236.8	145.3	175.3	161.1	14.20	12.352	
4,000.0	3,994.9	3,968.9	3,968.9	7.7	6.9	-79.19	236.8	145.3	174.2	159.6	14.58	11.951	
4,100.0	4,094.7	4,068.7	4,068.7	7.9	7.1	-81.00	236.8	145.3	173.2	158.3	14.96	11.582	
4,200.0	4,194.6	4,168.6	4,168.6	8.1	7.3	-82.83	236.8	145.3	172.5	157.1	15.34	11.244	
4,300.0	4,294.4	4,268.4	4,268.4	8.3	7.4	-84.67	236.8	145.3	171.9	156.1	15.72	10.935	
4,400.0	4,394.3	4,368.3	4,368.3	8.5	7.6	-86.52	236.8	145.3	171.4	155.3	16.09	10.651	
4,500.0	4,494.1	4,468.1	4,468.1	8.7	7.8	-88.38	236.8	145.3	171.2	154.7	16.47	10.393	
4,586.8	4,580.8	4,554.8	4,554.8	8.8	7.9	-90.00	236.8	145.3	171.1	154.3	16.80	10.188	CC
4,600.0	4,594.0	4,568.0	4,568.0	8.9	8.0	-90.25	236.8	145.3	171.1	154.3	16.84	10.158	
4,700.0	4,693.8	4,667.8	4,667.8	9.1	8.1	-92.11	236.8	145.3	171.2	154.0	17.22	9.945	
4,800.0	4,793.6	4,767.6	4,767.6	9.3	8.3	-93.97	236.8	145.3	171.5	153.9	17.59	9.752	ES
4,900.0	4,893.5	4,867.5	4,867.5	9.5	8.5	-95.82	236.8	145.3	172.0	154.0	17.96	9.578	
5,000.0	4,993.3	4,967.3	4,967.3	9.7	8.7	-97.65	236.8	145.3	172.7	154.3	18.32	9.422	

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 7910-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	5,093.2	5,067.2	5,067.2	9.9	8.8	-99.48	236.8	145.3	173.5	154.8	18.69	9.283	
5,200.0	5,193.0	5,167.0	5,167.0	10.1	9.0	-101.28	236.8	145.3	174.5	155.4	19.05	9.160	
5,300.0	5,292.9	5,266.9	5,266.9	10.3	9.2	-103.06	236.8	145.3	175.7	156.3	19.41	9.050	
5,400.0	5,392.7	5,366.7	5,366.7	10.5	9.4	-104.82	236.8	145.3	177.0	157.2	19.77	8.955	
5,500.0	5,492.6	5,466.6	5,466.6	10.7	9.5	-106.54	236.8	145.3	178.5	158.4	20.12	8.872	
5,600.0	5,592.4	5,566.4	5,566.4	10.9	9.7	-108.24	236.8	145.3	180.2	159.7	20.48	8.800	
5,700.0	5,692.2	5,666.2	5,666.2	11.1	9.9	-109.91	236.8	145.3	182.0	161.2	20.83	8.739	
5,800.0	5,792.1	5,766.1	5,766.1	11.3	10.1	-111.54	236.8	145.3	184.0	162.8	21.18	8.688	
5,900.0	5,891.9	5,865.9	5,865.9	11.5	10.2	-113.13	236.8	145.3	186.1	164.6	21.52	8.646	
6,000.0	5,991.8	5,965.8	5,965.8	11.7	10.4	-114.69	236.8	145.3	188.4	166.5	21.87	8.613	
6,100.0	6,091.6	6,065.6	6,065.6	11.9	10.6	-116.21	236.8	145.3	190.8	168.6	22.21	8.588	
6,200.0	6,191.5	6,165.5	6,165.5	12.1	10.8	-117.69	236.8	145.3	193.3	170.7	22.56	8.569	
6,300.0	6,291.3	6,265.3	6,265.3	12.3	10.9	-119.13	236.8	145.3	196.0	173.1	22.90	8.557	
6,400.0	6,391.2	6,365.2	6,365.2	12.5	11.1	-120.53	236.8	145.3	198.7	175.5	23.24	8.551	
6,500.0	6,491.0	6,465.0	6,465.0	12.7	11.3	-121.90	236.8	145.3	201.6	178.0	23.58	8.551 SF	
6,600.0	6,590.8	6,564.8	6,564.8	12.9	11.5	173.97	236.8	145.3	205.6	181.8	23.87	8.614	
6,700.0	6,689.5	6,663.5	6,663.5	13.0	11.6	145.04	236.8	145.3	219.2	195.3	23.90	9.171	
6,800.0	6,784.2	6,758.2	6,758.2	13.2	11.8	142.31	236.8	145.3	245.1	221.5	23.61	10.382	
6,900.0	6,872.0	6,846.0	6,846.0	13.4	11.9	143.17	236.8	145.3	284.7	261.7	22.95	12.403	
7,000.0	6,950.3	6,924.3	6,924.3	13.6	12.1	144.13	236.8	145.3	338.5	316.5	22.03	15.367	
7,100.0	7,016.6	6,990.6	6,990.6	14.0	12.2	143.67	236.8	145.3	405.8	384.7	21.14	19.199	
7,200.0	7,069.0	7,043.0	7,043.0	14.6	12.3	140.44	236.8	145.3	484.7	463.8	20.86	23.236	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - VOGL 5-8A (EXISTING) - KMG WELL - NO SURVEYS

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
11,700.0	7,130.0	7,164.0	7,164.0	85.2	12.5	90.00	-5,057.3	344.1	414.3	316.9	97.41	4.254	
11,800.0	7,130.0	7,164.0	7,164.0	86.9	12.5	90.00	-5,057.3	344.1	328.6	229.4	99.14	3.314	
11,900.0	7,130.0	7,164.0	7,164.0	88.7	12.5	90.00	-5,057.3	344.1	253.5	152.6	100.88	2.513	
12,000.0	7,130.0	7,164.0	7,164.0	90.4	12.5	90.00	-5,057.3	344.1	201.2	98.7	102.58	1.962	
12,072.0	7,130.0	7,164.0	7,164.0	91.7	12.5	90.00	-5,057.3	344.1	188.4	84.6	103.73	1.816	CC, ES, SF
12,100.0	7,130.0	7,164.0	7,164.0	92.1	12.5	90.00	-5,057.3	344.1	190.4	86.2	104.17	1.827	
12,200.0	7,130.0	7,164.0	7,164.0	93.9	12.5	90.00	-5,057.3	344.1	226.6	120.8	105.74	2.142	
12,300.0	7,130.0	7,164.0	7,164.0	95.6	12.5	90.00	-5,057.3	344.1	292.8	185.5	107.29	2.729	
12,400.0	7,130.0	7,164.0	7,164.0	97.3	12.5	90.00	-5,057.3	344.1	373.5	264.7	108.81	3.433	
12,500.0	7,130.0	7,164.0	7,164.0	99.0	12.5	90.00	-5,057.3	344.1	461.0	350.7	110.30	4.180	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2A-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-30.7	30.7				
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	-30.7	30.7	30.5	0.24	125.809	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-30.7	30.7	30.1	0.59	51.804	
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	-30.7	30.7	29.8	0.94	32.617	
400.0	400.0	400.0	400.0	0.6	0.6	-89.95	0.0	-30.7	30.7	29.4	1.29	23.802	CC, ES
500.0	500.0	499.6	499.6	0.8	0.8	-92.99	-1.6	-31.2	31.3	29.7	1.64	19.082	
600.0	600.0	599.5	599.4	1.0	1.0	-169.49	-5.5	-32.4	33.8	31.8	2.00	16.926	
700.0	700.0	699.3	699.1	1.2	1.2	-175.71	-9.5	-33.7	38.5	36.1	2.35	16.375	SF
800.0	799.9	799.0	798.7	1.4	1.4	179.48	-13.4	-34.9	45.2	42.5	2.70	16.751	
900.0	899.7	898.6	898.2	1.5	1.6	176.02	-17.4	-36.1	53.4	50.4	3.05	17.498	
1,000.0	999.6	998.2	997.8	1.7	1.7	173.50	-21.4	-37.3	61.8	58.4	3.41	18.140	
1,100.0	1,099.4	1,097.8	1,097.3	1.9	1.9	171.58	-25.3	-38.5	70.3	66.5	3.76	18.685	
1,200.0	1,199.2	1,197.5	1,196.8	2.1	2.1	170.07	-29.3	-39.7	78.8	74.7	4.11	19.150	
1,300.0	1,299.1	1,297.1	1,296.4	2.3	2.3	168.86	-33.2	-40.9	87.3	82.9	4.47	19.551	
1,400.0	1,398.9	1,396.7	1,395.9	2.5	2.5	167.87	-37.2	-42.2	95.9	91.1	4.82	19.898	
1,500.0	1,498.8	1,496.3	1,495.4	2.7	2.7	167.03	-41.1	-43.4	104.5	99.4	5.18	20.202	
1,600.0	1,598.6	1,595.9	1,595.0	2.9	2.9	166.33	-45.1	-44.6	113.2	107.7	5.53	20.470	
1,700.0	1,698.5	1,695.5	1,694.5	3.1	3.1	165.72	-49.0	-45.8	121.8	115.9	5.88	20.707	
1,800.0	1,798.3	1,795.2	1,794.0	3.3	3.2	165.20	-53.0	-47.0	130.5	124.3	6.24	20.919	
1,900.0	1,898.2	1,894.8	1,893.6	3.5	3.4	164.74	-56.9	-48.2	139.2	132.6	6.59	21.110	
2,000.0	1,998.0	1,994.4	1,993.1	3.7	3.6	164.33	-60.9	-49.4	147.8	140.9	6.95	21.281	
2,100.0	2,097.8	2,094.0	2,092.6	3.9	3.8	163.97	-64.8	-50.7	156.5	149.2	7.30	21.437	
2,200.0	2,197.7	2,193.6	2,192.2	4.1	4.0	163.65	-68.8	-51.9	165.2	157.6	7.66	21.579	
2,300.0	2,297.5	2,293.2	2,291.7	4.3	4.2	163.36	-72.7	-53.1	173.9	165.9	8.01	21.708	
2,400.0	2,397.4	2,392.9	2,391.2	4.5	4.4	163.10	-76.7	-54.3	182.6	174.3	8.37	21.827	
2,500.0	2,497.2	2,492.5	2,490.7	4.7	4.6	162.86	-80.7	-55.5	191.3	182.6	8.72	21.937	
2,600.0	2,597.1	2,592.1	2,590.3	4.9	4.7	162.64	-84.6	-56.7	200.0	191.0	9.08	22.038	
2,700.0	2,696.9	2,691.7	2,689.8	5.1	4.9	162.44	-88.6	-57.9	208.7	199.3	9.43	22.132	
2,800.0	2,796.8	2,791.3	2,789.3	5.3	5.1	162.26	-92.5	-59.1	217.4	207.7	9.79	22.219	
2,900.0	2,896.6	2,891.0	2,888.9	5.5	5.3	162.09	-96.5	-60.4	226.2	216.0	10.14	22.300	
3,000.0	2,996.4	2,990.6	2,988.4	5.7	5.5	161.93	-100.4	-61.6	234.9	224.4	10.50	22.376	
3,100.0	3,096.3	3,090.2	3,087.9	5.9	5.7	161.79	-104.4	-62.8	243.6	232.7	10.85	22.447	
3,200.0	3,196.1	3,189.8	3,187.5	6.1	5.9	161.65	-108.3	-64.0	252.3	241.1	11.21	22.513	
3,300.0	3,296.0	3,289.4	3,287.0	6.3	6.1	161.52	-112.3	-65.2	261.0	249.5	11.56	22.576	
3,400.0	3,395.8	3,389.0	3,386.5	6.5	6.2	161.41	-116.2	-66.4	269.8	257.8	11.92	22.634	
3,500.0	3,495.7	3,488.7	3,486.1	6.7	6.4	161.29	-120.2	-67.6	278.5	266.2	12.27	22.690	
3,600.0	3,595.5	3,588.3	3,585.6	6.9	6.6	161.19	-124.1	-68.9	287.2	274.6	12.63	22.742	
3,700.0	3,695.4	3,687.9	3,685.1	7.1	6.8	161.09	-128.1	-70.1	295.9	282.9	12.98	22.792	
3,800.0	3,795.2	3,787.5	3,784.7	7.3	7.0	161.00	-132.0	-71.3	304.6	291.3	13.34	22.839	
3,900.0	3,895.0	3,887.1	3,884.2	7.5	7.2	160.91	-136.0	-72.5	313.4	299.7	13.69	22.883	
4,000.0	3,994.9	3,986.7	3,983.7	7.7	7.4	160.83	-139.9	-73.7	322.1	308.0	14.05	22.925	
4,100.0	4,094.7	4,086.4	4,083.3	7.9	7.6	160.75	-143.9	-74.9	330.8	316.4	14.41	22.966	
4,200.0	4,194.6	4,186.0	4,182.8	8.1	7.8	160.68	-147.9	-76.1	339.5	324.8	14.76	23.004	
4,300.0	4,294.4	4,285.6	4,282.3	8.3	7.9	160.61	-151.8	-77.3	348.3	333.2	15.12	23.041	
4,400.0	4,394.3	4,385.2	4,381.8	8.5	8.1	160.54	-155.8	-78.6	357.0	341.5	15.47	23.075	
4,500.0	4,494.1	4,484.8	4,481.4	8.7	8.3	160.48	-159.7	-79.8	365.7	349.9	15.83	23.109	
4,600.0	4,594.0	4,584.4	4,580.9	8.9	8.5	160.41	-163.7	-81.0	374.5	358.3	16.18	23.141	
4,700.0	4,693.8	4,684.1	4,680.4	9.1	8.7	160.36	-167.6	-82.2	383.2	366.7	16.54	23.171	
4,800.0	4,793.6	4,783.7	4,780.0	9.3	8.9	160.30	-171.6	-83.4	391.9	375.0	16.89	23.200	
4,900.0	4,893.5	4,883.3	4,879.5	9.5	9.1	160.25	-175.5	-84.6	400.7	383.4	17.25	23.228	
5,000.0	4,993.3	4,982.9	4,979.0	9.7	9.3	160.20	-179.5	-85.8	409.4	391.8	17.60	23.255	
5,100.0	5,093.2	5,082.5	5,078.6	9.9	9.4	160.15	-183.4	-87.1	418.1	400.2	17.96	23.281	

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2A-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,193.0	5,182.2	5,178.1	10.1	9.6	160.10	-187.4	-88.3	426.8	408.5	18.31	23.306	
5,300.0	5,292.9	5,281.8	5,277.6	10.3	9.8	160.06	-191.3	-89.5	435.6	416.9	18.67	23.330	
5,400.0	5,392.7	5,381.4	5,377.2	10.5	10.0	160.01	-195.3	-90.7	444.3	425.3	19.03	23.353	
5,500.0	5,492.6	5,481.0	5,476.7	10.7	10.2	159.97	-199.2	-91.9	453.0	433.7	19.38	23.375	
5,600.0	5,592.4	5,580.6	5,576.2	10.9	10.4	159.93	-203.2	-93.1	461.8	442.0	19.74	23.397	
5,700.0	5,692.2	5,680.2	5,675.8	11.1	10.6	159.89	-207.1	-94.3	470.5	450.4	20.09	23.417	
5,800.0	5,792.1	5,779.9	5,775.3	11.3	10.8	159.86	-211.1	-95.5	479.2	458.8	20.45	23.437	
5,900.0	5,891.9	5,879.5	5,874.8	11.5	10.9	159.82	-215.1	-96.8	488.0	467.2	20.80	23.456	
6,000.0	5,991.8	5,979.1	5,974.4	11.7	11.1	159.79	-219.0	-98.0	496.7	475.5	21.16	23.475	
7,000.0	6,950.3	7,045.7	7,026.6	13.6	12.6	90.15	-171.5	-109.2	476.3	451.5	24.80	19.203	
7,100.0	7,016.6	7,068.5	7,046.1	14.0	12.6	93.52	-159.7	-109.3	463.8	438.6	25.17	18.423	
7,111.3	7,023.2	7,069.3	7,046.8	14.1	12.6	93.58	-159.2	-109.3	463.6	438.4	25.24	18.371	
7,200.0	7,069.0	7,067.5	7,045.3	14.6	12.6	92.17	-160.2	-109.3	472.0	446.2	25.78	18.308	
7,300.0	7,105.9	7,050.0	7,030.3	15.3	12.6	86.93	-169.3	-109.2	499.8	473.2	26.59	18.798	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2B-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.96	0.0	-11.2	11.2				
100.0	100.0	100.0	100.0	0.1	0.1	-89.96	0.0	-11.2	11.2	10.9	0.24	45.749	
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-11.2	11.2	10.6	0.59	18.838	
300.0	300.0	300.0	300.0	0.5	0.5	-89.96	0.0	-11.2	11.2	10.2	0.94	11.861	
400.0	400.0	400.0	400.0	0.6	0.6	-89.96	0.0	-11.2	11.2	9.9	1.29	8.655	
500.0	500.0	500.0	500.0	0.8	0.8	-89.96	0.0	-11.2	11.2	9.5	1.64	6.814	CC, ES
600.0	600.0	600.0	600.0	1.0	1.0	-160.96	0.0	-11.2	12.0	10.0	1.99	6.031	
700.0	700.0	700.2	700.1	1.2	1.2	-166.47	-0.4	-10.4	13.8	11.5	2.34	5.901	
800.0	799.9	800.3	800.2	1.4	1.3	-175.84	-1.8	-8.2	16.2	13.5	2.69	6.024	
900.0	899.7	900.4	900.2	1.5	1.5	173.24	-4.1	-4.4	19.1	16.1	3.04	6.278	
1,000.0	999.6	1,000.4	1,000.1	1.7	1.7	161.26	-7.2	0.8	21.9	18.5	3.41	6.418	
1,100.0	1,099.4	1,100.3	1,099.7	1.9	1.9	148.43	-11.3	7.5	25.2	21.4	3.80	6.615	
1,200.0	1,199.2	1,200.1	1,199.1	2.1	2.1	137.59	-15.6	14.8	29.4	25.2	4.21	6.994	
1,300.0	1,299.1	1,299.8	1,298.5	2.3	2.3	129.69	-20.0	22.0	34.4	29.8	4.61	7.471	
1,400.0	1,398.9	1,399.6	1,397.9	2.5	2.6	123.88	-24.4	29.3	39.9	34.9	5.01	7.969	
1,500.0	1,498.8	1,499.4	1,497.3	2.7	2.8	119.51	-28.8	36.6	45.8	40.3	5.41	8.451	
1,600.0	1,598.6	1,599.2	1,596.7	2.9	3.0	116.14	-33.2	43.9	51.8	46.0	5.82	8.904	
1,700.0	1,698.5	1,699.0	1,696.2	3.1	3.2	113.48	-37.5	51.1	57.9	51.7	6.22	9.322	
1,800.0	1,798.3	1,798.7	1,795.6	3.3	3.4	111.33	-41.9	58.4	64.2	57.6	6.62	9.706	
1,900.0	1,898.2	1,898.5	1,895.0	3.5	3.7	109.57	-46.3	65.7	70.6	63.5	7.02	10.056	
2,000.0	1,998.0	1,998.3	1,994.4	3.7	3.9	108.09	-50.7	72.9	76.9	69.5	7.41	10.377	
2,100.0	2,097.8	2,098.1	2,093.8	3.9	4.1	106.85	-55.1	80.2	83.4	75.6	7.81	10.671	
2,200.0	2,197.7	2,197.8	2,193.2	4.1	4.3	105.78	-59.5	87.5	89.9	81.6	8.21	10.941	
2,300.0	2,297.5	2,297.6	2,292.6	4.3	4.5	104.86	-63.8	94.8	96.4	87.7	8.61	11.188	
2,400.0	2,397.4	2,397.4	2,392.1	4.5	4.8	104.05	-68.2	102.0	102.9	93.9	9.01	11.417	
2,500.0	2,497.2	2,497.2	2,491.5	4.7	5.0	103.34	-72.6	109.3	109.4	100.0	9.41	11.628	
2,600.0	2,597.1	2,597.0	2,590.9	4.9	5.2	102.71	-77.0	116.6	116.0	106.2	9.81	11.823	
2,700.0	2,696.9	2,696.7	2,690.3	5.1	5.4	102.15	-81.4	123.8	122.5	112.3	10.21	12.004	
2,800.0	2,796.8	2,796.5	2,789.7	5.3	5.7	101.65	-85.8	131.1	129.1	118.5	10.61	12.173	
2,900.0	2,896.6	2,896.3	2,889.1	5.5	5.9	101.19	-90.1	138.4	135.7	124.7	11.00	12.330	
3,000.0	2,996.4	2,996.1	2,988.6	5.7	6.1	100.78	-94.5	145.6	142.3	130.9	11.40	12.477	
3,100.0	3,096.3	3,095.8	3,088.0	5.9	6.4	100.40	-98.9	152.9	148.9	137.1	11.80	12.615	
3,200.0	3,196.1	3,195.6	3,187.4	6.1	6.6	100.05	-103.3	160.2	155.5	143.3	12.20	12.744	
3,300.0	3,296.0	3,295.4	3,286.8	6.3	6.8	99.74	-107.7	167.5	162.1	149.5	12.60	12.865	
3,400.0	3,395.8	3,395.2	3,386.2	6.5	7.0	99.44	-112.1	174.7	168.7	155.7	13.00	12.980	
3,500.0	3,495.7	3,495.0	3,485.6	6.7	7.3	99.17	-116.4	182.0	175.3	161.9	13.40	13.087	
3,600.0	3,595.5	3,594.7	3,585.0	6.9	7.5	98.92	-120.8	189.3	181.9	168.1	13.79	13.189	
3,700.0	3,695.4	3,694.5	3,684.5	7.1	7.7	98.69	-125.2	196.5	188.6	174.4	14.19	13.285	
3,800.0	3,795.2	3,794.3	3,783.9	7.3	7.9	98.47	-129.6	203.8	195.2	180.6	14.59	13.376	
3,900.0	3,895.0	3,894.1	3,883.3	7.5	8.2	98.27	-134.0	211.1	201.8	186.8	14.99	13.463	
4,000.0	3,994.9	3,993.8	3,982.7	7.7	8.4	98.08	-138.3	218.4	208.5	193.1	15.39	13.545	
4,100.0	4,094.7	4,093.6	4,082.1	7.9	8.6	97.90	-142.7	225.6	215.1	199.3	15.79	13.623	
4,200.0	4,194.6	4,193.4	4,181.5	8.1	8.9	97.73	-147.1	232.9	221.7	205.5	16.19	13.698	
4,300.0	4,294.4	4,293.2	4,281.0	8.3	9.1	97.58	-151.5	240.2	228.4	211.8	16.59	13.768	
4,400.0	4,394.3	4,392.9	4,380.4	8.5	9.3	97.43	-155.9	247.4	235.0	218.0	16.99	13.836	
4,500.0	4,494.1	4,492.7	4,479.8	8.7	9.5	97.29	-160.3	254.7	241.7	224.3	17.38	13.901	
4,600.0	4,594.0	4,592.5	4,579.2	8.9	9.8	97.15	-164.6	262.0	248.3	230.5	17.78	13.963	
4,700.0	4,693.8	4,692.3	4,678.6	9.1	10.0	97.03	-169.0	269.3	254.9	236.8	18.18	14.022	
4,800.0	4,793.6	4,792.1	4,778.0	9.3	10.2	96.91	-173.4	276.5	261.6	243.0	18.58	14.078	
4,900.0	4,893.5	4,891.8	4,877.5	9.5	10.5	96.79	-177.8	283.8	268.2	249.3	18.98	14.133	
5,000.0	4,993.3	4,991.6	4,976.9	9.7	10.7	96.69	-182.2	291.1	274.9	255.5	19.38	14.185	
5,100.0	5,093.2	5,091.4	5,076.3	9.9	10.9	96.58	-186.6	298.3	281.5	261.8	19.78	14.235	

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2B-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,193.0	5,191.2	5,175.7	10.1	11.1	96.48	-190.9	305.6	288.2	268.0	20.18	14.283	
5,300.0	5,292.9	5,290.9	5,275.1	10.3	11.4	96.39	-195.3	312.9	294.8	274.3	20.57	14.329	
5,400.0	5,392.7	5,390.7	5,374.5	10.5	11.6	96.30	-199.7	320.1	301.5	280.5	20.97	14.374	
5,500.0	5,492.6	5,490.5	5,473.9	10.7	11.8	96.21	-204.1	327.4	308.1	286.8	21.37	14.417	
5,600.0	5,592.4	5,590.3	5,573.4	10.9	12.0	96.13	-208.5	334.7	314.8	293.0	21.77	14.458	
5,700.0	5,692.2	5,690.1	5,672.8	11.1	12.3	96.05	-212.9	342.0	321.4	299.3	22.17	14.498	
5,800.0	5,792.1	5,789.8	5,772.2	11.3	12.5	95.98	-217.2	349.2	328.1	305.5	22.57	14.537	
5,900.0	5,891.9	5,889.6	5,871.6	11.5	12.7	95.90	-221.6	356.5	334.7	311.8	22.97	14.574	
6,000.0	5,991.8	5,989.4	5,971.0	11.7	13.0	95.83	-226.0	363.8	341.4	318.0	23.37	14.610	
6,100.0	6,091.6	6,089.2	6,070.4	11.9	13.2	95.77	-230.4	371.0	348.1	324.3	23.77	14.645	
6,200.0	6,191.5	6,188.9	6,169.9	12.1	13.4	95.70	-234.8	378.3	354.7	330.5	24.16	14.679	
6,300.0	6,291.3	6,288.7	6,269.3	12.3	13.6	95.64	-239.2	385.6	361.4	336.8	24.56	14.711	
6,400.0	6,391.2	6,388.5	6,368.7	12.5	13.9	95.58	-243.5	392.9	368.0	343.1	24.96	14.743	
6,500.0	6,491.0	6,488.3	6,468.1	12.7	14.1	95.52	-247.9	400.1	374.7	349.3	25.36	14.773	
6,600.0	6,590.8	6,708.3	6,685.2	12.9	14.4	30.83	-225.7	415.9	368.2	342.2	26.00	14.162	
6,700.0	6,689.5	6,901.0	6,856.7	13.0	14.4	-9.12	-140.8	428.1	313.7	287.8	25.91	12.108	
6,800.0	6,784.2	6,994.9	6,927.7	13.2	14.5	-38.36	-79.7	433.1	233.8	209.1	24.67	9.476	
6,900.0	6,872.0	7,030.9	6,952.2	13.4	14.5	-70.21	-53.3	434.8	150.3	126.2	24.13	6.228	
7,000.0	6,950.3	7,036.5	6,955.8	13.6	14.5	-82.07	-49.1	435.0	94.0	69.5	24.48	3.839	
7,019.9	6,964.5	7,035.3	6,955.1	13.7	14.5	-81.70	-50.0	435.0	91.9	67.3	24.54	3.744	SF
7,100.0	7,016.6	7,025.3	6,948.4	14.0	14.5	-72.73	-57.5	434.5	121.1	96.6	24.44	4.954	
7,200.0	7,069.0	7,000.0	6,931.3	14.6	14.5	-49.61	-76.0	433.3	197.4	175.0	22.47	8.786	
7,300.0	7,105.9	6,976.3	6,914.4	15.3	14.5	-32.03	-92.7	432.2	281.7	262.1	19.59	14.381	
7,400.0	7,126.1	6,950.0	6,895.0	16.2	14.5	-20.86	-110.3	430.8	364.4	346.9	17.44	20.890	
7,500.0	7,130.0	6,900.0	6,855.9	17.2	14.4	-14.00	-141.3	428.1	442.9	426.3	16.53	26.792	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2C-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.06	0.0	8.4	8.4				
100.0	100.0	100.0	100.0	0.1	0.1	90.06	0.0	8.4	8.4	8.1	0.24	34.312	
200.0	200.0	200.0	200.0	0.3	0.3	90.06	0.0	8.4	8.4	7.8	0.59	14.128	
300.0	300.0	300.0	300.0	0.5	0.5	90.06	0.0	8.4	8.4	7.4	0.94	8.896	CC, ES
400.0	400.0	399.9	399.8	0.6	0.6	91.79	-0.3	9.2	9.2	7.9	1.29	7.131	SF
500.0	500.0	499.6	499.6	0.8	0.8	95.51	-1.1	11.7	11.7	10.1	1.64	7.136	
600.0	600.0	599.3	599.2	1.0	1.0	31.13	-2.5	15.8	15.3	13.3	1.99	7.669	
700.0	700.0	698.9	698.6	1.2	1.2	37.70	-4.5	21.5	19.2	16.8	2.34	8.200	
800.0	799.9	798.4	797.8	1.4	1.4	44.60	-7.0	28.9	23.7	21.0	2.69	8.814	
900.0	899.7	897.8	896.7	1.5	1.6	50.38	-10.0	37.9	29.5	26.4	3.05	9.645	
1,000.0	999.6	996.9	995.2	1.7	1.9	53.61	-13.6	48.5	37.0	33.6	3.42	10.824	
1,100.0	1,099.4	1,096.3	1,093.8	1.9	2.1	55.25	-17.7	60.4	46.0	42.2	3.79	12.127	
1,200.0	1,199.2	1,195.9	1,192.5	2.1	2.4	56.33	-21.7	72.4	55.1	50.9	4.17	13.217	
1,300.0	1,299.1	1,295.4	1,291.3	2.3	2.7	57.11	-25.8	84.4	64.2	59.6	4.54	14.124	
1,400.0	1,398.9	1,395.0	1,390.1	2.5	2.9	57.69	-29.9	96.4	73.3	68.4	4.92	14.888	
1,500.0	1,498.8	1,494.6	1,488.9	2.7	3.2	58.14	-34.0	108.4	82.4	77.1	5.30	15.541	
1,600.0	1,598.6	1,594.2	1,587.6	2.9	3.5	58.50	-38.1	120.4	91.5	85.9	5.68	16.103	
1,700.0	1,698.5	1,693.8	1,686.4	3.1	3.8	58.80	-42.1	132.4	100.7	94.6	6.07	16.594	
1,800.0	1,798.3	1,793.4	1,785.2	3.3	4.0	59.05	-46.2	144.4	109.8	103.4	6.45	17.024	
1,900.0	1,898.2	1,892.9	1,883.9	3.5	4.3	59.25	-50.3	156.4	118.9	112.1	6.83	17.405	
2,000.0	1,998.0	1,992.5	1,982.7	3.7	4.6	59.43	-54.4	168.4	128.1	120.8	7.22	17.744	
2,100.0	2,097.8	2,092.1	2,081.5	3.9	4.9	59.59	-58.5	180.4	137.2	129.6	7.60	18.049	
2,200.0	2,197.7	2,191.7	2,180.2	4.1	5.2	59.73	-62.5	192.5	146.3	138.3	7.99	18.323	
2,300.0	2,297.5	2,291.3	2,279.0	4.3	5.4	59.85	-66.6	204.5	155.5	147.1	8.37	18.571	
2,400.0	2,397.4	2,390.8	2,377.8	4.5	5.7	59.95	-70.7	216.5	164.6	155.8	8.76	18.798	
2,500.0	2,497.2	2,490.4	2,476.6	4.7	6.0	60.05	-74.8	228.5	173.7	164.6	9.14	19.004	
2,600.0	2,597.1	2,590.0	2,575.3	4.9	6.3	60.13	-78.8	240.5	182.9	173.3	9.53	19.194	
2,700.0	2,696.9	2,689.6	2,674.1	5.1	6.6	60.21	-82.9	252.5	192.0	182.1	9.91	19.368	
2,800.0	2,796.8	2,789.2	2,772.9	5.3	6.8	60.28	-87.0	264.5	201.1	190.8	10.30	19.529	
2,900.0	2,896.6	2,888.8	2,871.6	5.5	7.1	60.35	-91.1	276.5	210.3	199.6	10.69	19.678	
3,000.0	2,996.4	2,988.3	2,970.4	5.7	7.4	60.41	-95.2	288.5	219.4	208.3	11.07	19.817	
3,100.0	3,096.3	3,087.9	3,069.2	5.9	7.7	60.46	-99.2	300.5	228.6	217.1	11.46	19.946	
3,200.0	3,196.1	3,187.5	3,168.0	6.1	8.0	60.51	-103.3	312.5	237.7	225.8	11.85	20.066	
3,300.0	3,296.0	3,287.1	3,266.7	6.3	8.2	60.56	-107.4	324.6	246.8	234.6	12.23	20.179	
3,400.0	3,395.8	3,386.7	3,365.5	6.5	8.5	60.60	-111.5	336.6	256.0	243.3	12.62	20.285	
3,500.0	3,495.7	3,486.2	3,464.3	6.7	8.8	60.64	-115.6	348.6	265.1	252.1	13.01	20.384	
3,600.0	3,595.5	3,585.8	3,563.0	6.9	9.1	60.68	-119.6	360.6	274.2	260.8	13.39	20.477	
3,700.0	3,695.4	3,685.4	3,661.8	7.1	9.4	60.71	-123.7	372.6	283.4	269.6	13.78	20.565	
3,800.0	3,795.2	3,785.0	3,760.6	7.3	9.7	60.75	-127.8	384.6	292.5	278.3	14.17	20.649	
3,900.0	3,895.0	3,884.6	3,859.3	7.5	9.9	60.78	-131.9	396.6	301.7	287.1	14.55	20.727	
4,000.0	3,994.9	3,984.1	3,958.1	7.7	10.2	60.81	-136.0	408.6	310.8	295.9	14.94	20.802	
4,100.0	4,094.7	4,083.7	4,056.9	7.9	10.5	60.83	-140.0	420.6	319.9	304.6	15.33	20.873	
4,200.0	4,194.6	4,183.3	4,155.7	8.1	10.8	60.86	-144.1	432.6	329.1	313.4	15.71	20.940	
4,300.0	4,294.4	4,282.9	4,254.4	8.3	11.1	60.89	-148.2	444.6	338.2	322.1	16.10	21.004	
4,400.0	4,394.3	4,382.5	4,353.2	8.5	11.3	60.91	-152.3	456.7	347.3	330.9	16.49	21.065	
4,500.0	4,494.1	4,482.1	4,452.0	8.7	11.6	60.93	-156.4	468.7	356.5	339.6	16.88	21.123	
4,600.0	4,594.0	4,581.6	4,550.7	8.9	11.9	60.95	-160.4	480.7	365.6	348.4	17.26	21.178	
4,700.0	4,693.8	4,681.2	4,649.5	9.1	12.2	60.97	-164.5	492.7	374.8	357.1	17.65	21.231	
4,800.0	4,793.6	4,780.8	4,748.3	9.3	12.5	60.99	-168.6	504.7	383.9	365.9	18.04	21.281	
4,900.0	4,893.5	4,880.4	4,847.1	9.5	12.8	61.01	-172.7	516.7	393.0	374.6	18.43	21.330	
5,000.0	4,993.3	4,980.0	4,945.8	9.7	13.0	61.03	-176.8	528.7	402.2	383.4	18.81	21.376	
5,100.0	5,093.2	5,079.5	5,044.6	9.9	13.3	61.04	-180.8	540.7	411.3	392.1	19.20	21.421	

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-Geist 2C-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,193.0	5,179.1	5,143.4	10.1	13.6	61.06	-184.9	552.7	420.5	400.9	19.59	21.464	
5,300.0	5,292.9	5,278.7	5,242.1	10.3	13.9	61.07	-189.0	564.7	429.6	409.6	19.98	21.505	
5,400.0	5,392.7	5,378.3	5,340.9	10.5	14.2	61.09	-193.1	576.7	438.7	418.4	20.36	21.544	
5,500.0	5,492.6	5,477.9	5,439.7	10.7	14.4	61.10	-197.1	588.7	447.9	427.1	20.75	21.582	
5,600.0	5,592.4	5,577.5	5,538.4	10.9	14.7	61.12	-201.2	600.8	457.0	435.9	21.14	21.619	
5,700.0	5,692.2	5,677.0	5,637.2	11.1	15.0	61.13	-205.3	612.8	466.1	444.6	21.53	21.654	
5,800.0	5,792.1	5,776.6	5,736.0	11.3	15.3	61.14	-209.4	624.8	475.3	453.4	21.91	21.688	
5,900.0	5,891.9	5,876.2	5,834.8	11.5	15.6	61.15	-213.5	636.8	484.4	462.1	22.30	21.721	
6,000.0	5,991.8	5,975.8	5,933.5	11.7	15.9	61.16	-217.5	648.8	493.6	470.9	22.69	21.752	
7,000.0	6,950.3	7,020.3	6,965.1	13.6	18.6	-68.72	-213.2	774.2	466.5	442.2	24.26	19.233	
7,100.0	7,016.6	7,063.3	7,004.3	14.0	18.6	-77.83	-196.3	779.0	436.0	410.9	25.15	17.334	
7,200.0	7,069.0	7,075.1	7,014.8	14.6	18.7	-81.10	-191.1	780.3	423.1	397.2	25.95	16.304	
7,210.3	7,073.6	7,075.1	7,014.9	14.6	18.7	-81.15	-191.1	780.3	423.0	397.0	26.04	16.245	
7,300.0	7,105.9	7,068.8	7,009.3	15.3	18.6	-79.63	-193.9	779.6	431.7	405.0	26.69	16.173	
7,400.0	7,126.1	7,050.0	6,992.3	16.2	18.6	-74.41	-201.8	777.5	459.7	432.3	27.40	16.777	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2A-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-39.1	39.1				
100.0	100.0	99.0	99.0	0.1	0.1	-89.95	0.0	-39.1	39.1	38.9	0.24	160.925	
200.0	200.0	199.0	199.0	0.3	0.3	-89.95	0.0	-39.1	39.1	38.5	0.59	66.126	CC, ES
300.0	300.0	298.5	298.5	0.5	0.5	-89.13	0.6	-39.7	39.8	38.8	0.94	42.264	
400.0	400.0	397.9	397.9	0.6	0.6	-86.78	2.3	-41.6	41.7	40.4	1.29	32.257	
500.0	500.0	497.2	497.1	0.8	0.8	-83.33	5.2	-44.8	45.2	43.5	1.65	27.299	
600.0	600.0	596.7	596.4	1.0	1.0	-149.48	9.1	-49.1	50.7	48.7	2.00	25.423	
700.0	700.0	696.4	696.0	1.2	1.2	-147.58	13.2	-53.5	58.1	55.7	2.35	24.721	SF
800.0	799.9	796.0	795.4	1.4	1.4	-146.93	17.2	-57.9	66.9	64.2	2.70	24.741	
900.0	899.7	895.6	894.7	1.5	1.6	-146.95	21.2	-62.3	76.7	73.7	3.06	25.056	
1,000.0	999.6	995.1	994.1	1.7	1.8	-146.98	25.2	-66.7	86.6	83.2	3.42	25.304	
1,100.0	1,099.4	1,094.6	1,093.4	1.9	2.0	-147.01	29.3	-71.1	96.4	92.7	3.78	25.499	
1,200.0	1,199.2	1,194.1	1,192.7	2.1	2.2	-147.03	33.3	-75.5	106.3	102.2	4.14	25.657	
1,300.0	1,299.1	1,293.6	1,292.1	2.3	2.4	-147.05	37.3	-79.9	116.1	111.6	4.50	25.788	
1,400.0	1,398.9	1,393.1	1,391.4	2.5	2.6	-147.06	41.3	-84.3	126.0	121.1	4.87	25.898	
1,500.0	1,498.8	1,492.6	1,490.7	2.7	2.8	-147.07	45.4	-88.7	135.9	130.6	5.23	25.991	
1,600.0	1,598.6	1,592.2	1,590.1	2.9	3.0	-147.09	49.4	-93.0	145.7	140.1	5.59	26.071	
1,700.0	1,698.5	1,691.7	1,689.4	3.1	3.2	-147.09	53.4	-97.4	155.6	149.6	5.95	26.140	
1,800.0	1,798.3	1,791.2	1,788.7	3.3	3.4	-147.10	57.4	-101.8	165.4	159.1	6.31	26.202	
1,900.0	1,898.2	1,890.7	1,888.1	3.5	3.6	-147.11	61.5	-106.2	175.3	168.6	6.68	26.256	
2,000.0	1,998.0	1,990.2	1,987.4	3.7	3.8	-147.12	65.5	-110.6	185.1	178.1	7.04	26.304	
2,100.0	2,097.8	2,089.7	2,086.7	3.9	4.0	-147.12	69.5	-115.0	195.0	187.6	7.40	26.347	
2,200.0	2,197.7	2,189.2	2,186.1	4.1	4.2	-147.13	73.5	-119.4	204.8	197.1	7.76	26.386	
2,300.0	2,297.5	2,288.8	2,285.4	4.3	4.4	-147.13	77.6	-123.8	214.7	206.6	8.13	26.421	
2,400.0	2,397.4	2,388.3	2,384.7	4.5	4.6	-147.14	81.6	-128.2	224.5	216.1	8.49	26.453	
2,500.0	2,497.2	2,487.8	2,484.1	4.7	4.8	-147.14	85.6	-132.6	234.4	225.5	8.85	26.482	
2,600.0	2,597.1	2,587.3	2,583.4	4.9	5.1	-147.15	89.6	-137.0	244.3	235.0	9.21	26.509	
2,700.0	2,696.9	2,686.8	2,682.8	5.1	5.3	-147.15	93.7	-141.4	254.1	244.5	9.58	26.534	
2,800.0	2,796.8	2,786.3	2,782.1	5.3	5.5	-147.15	97.7	-145.8	264.0	254.0	9.94	26.557	
2,900.0	2,896.6	2,885.8	2,881.4	5.5	5.7	-147.16	101.7	-150.2	273.8	263.5	10.30	26.578	
3,000.0	2,996.4	2,985.3	2,980.8	5.7	5.9	-147.16	105.7	-154.6	283.7	273.0	10.67	26.598	
3,100.0	3,096.3	3,084.9	3,080.1	5.9	6.1	-147.16	109.8	-159.0	293.5	282.5	11.03	26.616	
3,200.0	3,196.1	3,184.4	3,179.4	6.1	6.3	-147.16	113.8	-163.4	303.4	292.0	11.39	26.633	
3,300.0	3,296.0	3,283.9	3,278.8	6.3	6.5	-147.17	117.8	-167.8	313.2	301.5	11.75	26.649	
3,400.0	3,395.8	3,383.4	3,378.1	6.5	6.7	-147.17	121.8	-172.2	323.1	311.0	12.12	26.664	
3,500.0	3,495.7	3,482.9	3,477.4	6.7	6.9	-147.17	125.9	-176.6	332.9	320.5	12.48	26.678	
3,600.0	3,595.5	3,582.4	3,576.8	6.9	7.1	-147.17	129.9	-181.0	342.8	330.0	12.84	26.691	
3,700.0	3,695.4	3,681.9	3,676.1	7.1	7.3	-147.17	133.9	-185.4	352.7	339.4	13.21	26.704	
3,800.0	3,795.2	3,781.5	3,775.4	7.3	7.5	-147.18	137.9	-189.8	362.5	348.9	13.57	26.716	
3,900.0	3,895.0	3,881.0	3,874.8	7.5	7.7	-147.18	141.9	-194.2	372.4	358.4	13.93	26.727	
4,000.0	3,994.9	3,980.5	3,974.1	7.7	7.9	-147.18	146.0	-198.6	382.2	367.9	14.30	26.737	
4,100.0	4,094.7	4,080.0	4,073.4	7.9	8.1	-147.18	150.0	-203.0	392.1	377.4	14.66	26.747	
4,200.0	4,194.6	4,179.5	4,172.8	8.1	8.3	-147.18	154.0	-207.4	401.9	386.9	15.02	26.757	
4,300.0	4,294.4	4,279.0	4,272.1	8.3	8.5	-147.18	158.0	-211.8	411.8	396.4	15.38	26.766	
4,400.0	4,394.3	4,378.5	4,371.4	8.5	8.7	-147.18	162.1	-216.2	421.6	405.9	15.75	26.775	
4,500.0	4,494.1	4,478.0	4,470.8	8.7	8.9	-147.19	166.1	-220.5	431.5	415.4	16.11	26.783	
4,600.0	4,594.0	4,577.6	4,570.1	8.9	9.1	-147.19	170.1	-224.9	441.3	424.9	16.47	26.791	
4,700.0	4,693.8	4,677.1	4,669.4	9.1	9.3	-147.19	174.1	-229.3	451.2	434.4	16.84	26.798	
4,800.0	4,793.6	4,776.6	4,768.8	9.3	9.5	-147.19	178.2	-233.7	461.0	443.8	17.20	26.805	
4,900.0	4,893.5	4,876.1	4,868.1	9.5	9.7	-147.19	182.2	-238.1	470.9	453.3	17.56	26.812	
5,000.0	4,993.3	4,975.6	4,967.4	9.7	9.9	-147.19	186.2	-242.5	480.8	462.8	17.93	26.819	
5,100.0	5,093.2	5,075.1	5,066.8	9.9	10.1	-147.19	190.2	-246.9	490.6	472.3	18.29	26.825	

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2B-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-19.6	19.6				
100.0	100.0	99.0	99.0	0.1	0.1	-89.95	0.0	-19.6	19.6	19.3	0.24	80.463	
200.0	200.0	199.0	199.0	0.3	0.3	-89.95	0.0	-19.6	19.6	19.0	0.59	33.063	
300.0	300.0	299.0	299.0	0.5	0.5	-89.95	0.0	-19.6	19.6	18.6	0.94	20.795	
400.0	400.0	399.0	399.0	0.6	0.6	-89.95	0.0	-19.6	19.6	18.3	1.29	15.167	
500.0	500.0	499.0	499.0	0.8	0.8	-89.95	0.0	-19.6	19.6	17.9	1.64	11.937	CC, ES
600.0	600.0	599.0	599.0	1.0	1.0	-160.35	0.0	-19.6	20.4	18.4	1.99	10.254	
700.0	700.0	699.0	699.0	1.2	1.2	-162.55	0.0	-19.6	22.9	20.5	2.34	9.786	
800.0	799.9	798.9	798.9	1.4	1.3	-165.31	0.0	-19.6	27.1	24.4	2.68	10.078	
900.0	899.7	898.7	898.7	1.5	1.5	-167.79	0.0	-19.6	32.4	29.4	3.03	10.697	
1,000.0	999.6	998.6	998.6	1.7	1.7	-169.57	0.0	-19.6	37.9	34.5	3.38	11.210	
1,100.0	1,099.4	1,098.4	1,098.4	1.9	1.9	-170.90	0.0	-19.6	43.4	39.7	3.73	11.634	
1,200.0	1,199.2	1,198.2	1,198.2	2.1	2.0	-171.94	0.0	-19.6	48.9	44.8	4.08	11.991	
1,300.0	1,299.1	1,298.1	1,298.1	2.3	2.2	-172.76	0.0	-19.6	54.4	50.0	4.43	12.294	
1,400.0	1,398.9	1,397.9	1,397.9	2.5	2.4	-173.43	0.0	-19.6	60.0	55.2	4.78	12.555	
1,500.0	1,498.8	1,497.8	1,497.8	2.7	2.6	-173.99	0.0	-19.6	65.5	60.4	5.13	12.782	
1,600.0	1,598.6	1,597.6	1,597.6	2.9	2.7	-174.46	0.0	-19.6	71.1	65.6	5.47	12.981	
1,700.0	1,698.5	1,697.5	1,697.5	3.1	2.9	-174.86	0.0	-19.6	76.6	70.8	5.82	13.157	
1,800.0	1,798.3	1,797.3	1,797.3	3.3	3.1	-175.21	0.0	-19.6	82.2	76.0	6.17	13.314	
1,900.0	1,898.2	1,897.2	1,897.2	3.5	3.3	-175.51	0.0	-19.6	87.7	81.2	6.52	13.454	
2,000.0	1,998.0	1,997.0	1,997.0	3.7	3.4	-175.78	0.0	-19.6	93.3	86.4	6.87	13.580	
2,100.0	2,097.8	2,096.8	2,096.8	3.9	3.6	-176.02	0.0	-19.6	98.8	91.6	7.22	13.694	
2,200.0	2,197.7	2,196.7	2,196.7	4.1	3.8	-176.23	0.0	-19.6	104.4	96.8	7.57	13.799	
2,300.0	2,297.5	2,296.5	2,296.5	4.3	4.0	-176.42	0.0	-19.6	110.0	102.1	7.92	13.894	
2,400.0	2,397.4	2,396.4	2,396.4	4.5	4.1	-176.59	0.0	-19.6	115.5	107.3	8.26	13.981	
2,500.0	2,497.2	2,496.2	2,496.2	4.7	4.3	-176.75	0.0	-19.6	121.1	112.5	8.61	14.061	
2,600.0	2,597.1	2,596.1	2,596.1	4.9	4.5	-176.89	0.0	-19.6	126.7	117.7	8.96	14.135	
2,700.0	2,696.9	2,695.9	2,695.9	5.1	4.7	-177.03	0.0	-19.6	132.2	122.9	9.31	14.204	
2,800.0	2,796.8	2,795.8	2,795.8	5.3	4.8	-177.15	0.0	-19.6	137.8	128.1	9.66	14.267	
2,900.0	2,896.6	2,895.6	2,895.6	5.5	5.0	-177.26	0.0	-19.6	143.4	133.4	10.01	14.327	
3,000.0	2,996.4	2,995.4	2,995.4	5.7	5.2	-177.36	0.0	-19.6	148.9	138.6	10.36	14.382	
3,100.0	3,096.3	3,095.3	3,095.3	5.9	5.3	-177.45	0.0	-19.6	154.5	143.8	10.70	14.434	
3,200.0	3,196.1	3,195.1	3,195.1	6.1	5.5	-177.54	0.0	-19.6	160.1	149.0	11.05	14.482	
3,300.0	3,296.0	3,295.0	3,295.0	6.3	5.7	-177.63	0.0	-19.6	165.6	154.2	11.40	14.528	
3,400.0	3,395.8	3,394.8	3,394.8	6.5	5.9	-177.70	0.0	-19.6	171.2	159.5	11.75	14.571	
3,500.0	3,495.7	3,494.7	3,494.7	6.7	6.0	-177.78	0.0	-19.6	176.8	164.7	12.10	14.611	
3,600.0	3,595.5	3,594.5	3,594.5	6.9	6.2	-177.84	0.0	-19.6	182.4	169.9	12.45	14.650	
3,700.0	3,695.4	3,694.4	3,694.4	7.1	6.4	-177.91	0.0	-19.6	187.9	175.1	12.80	14.686	
3,800.0	3,795.2	3,794.2	3,794.2	7.3	6.6	-177.97	0.0	-19.6	193.5	180.4	13.15	14.720	
3,900.0	3,895.0	3,894.0	3,894.0	7.5	6.7	-178.02	0.0	-19.6	199.1	185.6	13.49	14.753	
4,000.0	3,994.9	3,993.9	3,993.9	7.7	6.9	-178.08	0.0	-19.6	204.6	190.8	13.84	14.783	
4,100.0	4,094.7	4,095.0	4,094.9	7.9	7.1	-177.93	0.8	-19.5	209.9	195.7	14.19	14.791	
4,200.0	4,194.6	4,196.1	4,196.1	8.1	7.3	-177.34	3.4	-19.4	214.6	200.1	14.55	14.756	
4,300.0	4,294.4	4,297.2	4,297.1	8.3	7.4	-176.34	7.7	-19.3	218.8	203.9	14.90	14.683	
4,400.0	4,394.3	4,398.2	4,397.9	8.5	7.6	-174.93	13.8	-19.1	222.4	207.2	15.26	14.579	
4,500.0	4,494.1	4,499.1	4,498.4	8.7	7.8	-173.15	21.7	-18.8	225.8	210.1	15.62	14.452	
4,600.0	4,594.0	4,599.5	4,598.4	8.9	8.0	-171.00	31.3	-18.4	228.9	212.9	15.99	14.311	
4,700.0	4,693.8	4,699.1	4,697.5	9.1	8.2	-168.78	41.5	-18.1	232.2	215.8	16.37	14.182	
4,800.0	4,793.6	4,798.6	4,796.5	9.3	8.4	-166.62	51.6	-17.7	235.8	219.0	16.75	14.075	
4,900.0	4,893.5	4,898.1	4,895.5	9.5	8.6	-164.53	61.7	-17.3	239.8	222.6	17.14	13.986	
5,000.0	4,993.3	4,997.7	4,994.5	9.7	8.8	-162.51	71.9	-17.0	244.0	226.5	17.54	13.915	
5,100.0	5,093.2	5,097.2	5,093.6	9.9	9.0	-160.56	82.0	-16.6	248.6	230.6	17.93	13.860	

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2B-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,193.0	5,196.8	5,192.6	10.1	9.2	-158.68	92.2	-16.3	253.4	235.1	18.34	13.820	
5,300.0	5,292.9	5,296.3	5,291.6	10.3	9.4	-156.88	102.3	-15.9	258.5	239.8	18.75	13.792	
5,400.0	5,392.7	5,395.9	5,390.6	10.5	9.6	-155.14	112.4	-15.5	263.9	244.7	19.16	13.776	
5,500.0	5,492.6	5,495.4	5,489.6	10.7	9.8	-153.48	122.6	-15.2	269.5	249.9	19.57	13.771	
5,600.0	5,592.4	5,594.9	5,588.7	10.9	10.0	-151.88	132.7	-14.8	275.3	255.3	19.98	13.775	
5,700.0	5,692.2	5,694.5	5,687.7	11.1	10.2	-150.35	142.8	-14.4	281.3	260.9	20.40	13.788	
5,800.0	5,792.1	5,794.0	5,786.7	11.3	10.4	-148.89	153.0	-14.1	287.5	266.7	20.82	13.809	
5,900.0	5,891.9	5,893.6	5,885.7	11.5	10.6	-147.48	163.1	-13.7	293.9	272.6	21.24	13.836	
6,000.0	5,991.8	5,993.1	5,984.8	11.7	10.9	-146.14	173.3	-13.3	300.4	278.8	21.66	13.870	
6,100.0	6,091.6	6,092.7	6,083.8	11.9	11.1	-144.86	183.4	-13.0	307.1	285.1	22.08	13.909	
6,200.0	6,191.5	6,192.2	6,182.8	12.1	11.3	-143.63	193.5	-12.6	314.0	291.5	22.50	13.953	
6,300.0	6,291.3	6,291.7	6,281.8	12.3	11.5	-142.45	203.7	-12.3	321.0	298.1	22.93	14.001	
6,400.0	6,391.2	6,391.3	6,380.9	12.5	11.7	-141.33	213.8	-11.9	328.1	304.8	23.35	14.053	
6,500.0	6,491.0	6,490.8	6,479.9	12.7	12.0	-140.25	224.0	-11.5	335.4	311.6	23.77	14.109	
6,600.0	6,590.8	6,590.2	6,578.7	12.9	12.2	157.71	234.1	-11.2	343.4	319.2	24.15	14.218	
6,700.0	6,689.5	6,687.0	6,675.0	13.0	12.4	129.75	243.9	-10.8	358.0	333.7	24.34	14.710	
6,800.0	6,784.2	6,805.6	6,793.3	13.2	12.6	127.96	249.5	-10.4	380.2	355.9	24.29	15.654	
6,900.0	6,872.0	6,949.8	6,934.9	13.4	12.7	128.91	224.4	-9.9	402.8	378.9	23.89	16.859	
7,000.0	6,950.3	7,108.9	7,078.4	13.6	12.6	129.40	156.9	-9.3	422.2	398.9	23.33	18.100	
7,100.0	7,016.6	7,279.3	7,205.2	14.0	12.7	128.59	44.0	-8.9	436.1	413.1	23.04	18.925	
7,200.0	7,069.0	7,453.4	7,294.8	14.6	13.1	126.20	-104.5	-8.5	443.1	419.5	23.61	18.767	
7,300.0	7,105.9	7,622.0	7,335.3	15.3	14.2	122.37	-267.6	-8.4	443.5	418.1	25.40	17.463	
7,379.3	7,123.3	7,721.2	7,338.0	16.0	15.1	119.62	-366.7	-8.4	441.5	414.3	27.20	16.233	
7,400.0	7,126.1	7,741.7	7,338.0	16.2	15.3	119.17	-387.2	-8.4	441.7	414.1	27.64	15.983	
7,500.0	7,130.0	7,841.2	7,338.0	17.2	16.3	117.95	-486.7	-8.4	447.0	417.2	29.81	14.992	
7,600.0	7,130.0	7,940.9	7,338.0	18.4	17.4	117.49	-586.4	-8.4	453.9	421.9	31.97	14.196	
7,700.0	7,130.0	8,040.6	7,338.0	19.6	18.7	117.04	-686.1	-8.4	460.9	426.6	34.31	13.434	
7,800.0	7,130.0	8,140.3	7,338.0	20.9	20.0	116.60	-785.8	-8.4	467.9	431.1	36.79	12.719	
7,900.0	7,130.0	8,240.0	7,338.0	22.3	21.4	116.17	-885.5	-8.4	474.8	435.5	39.37	12.061	
8,000.0	7,130.0	8,339.8	7,338.0	23.7	22.8	115.81	-985.3	-8.4	480.6	438.6	42.00	11.443	
8,100.0	7,130.0	8,439.6	7,338.0	25.1	24.3	115.55	-1,085.2	-8.4	484.8	440.1	44.68	10.852	
8,200.0	7,130.0	8,539.6	7,338.0	26.6	25.8	115.39	-1,185.1	-8.4	487.5	440.1	47.41	10.283	
8,300.0	7,130.0	8,639.6	7,338.0	28.1	27.3	115.26	-1,285.1	-8.4	489.9	439.6	50.24	9.751	
8,400.0	7,130.0	8,739.5	7,338.0	29.7	28.9	115.13	-1,385.0	-8.4	492.3	439.1	53.12	9.267	
8,500.0	7,130.0	8,839.5	7,338.0	31.2	30.5	115.00	-1,485.0	-8.4	494.6	438.6	56.04	8.826	
8,600.0	7,130.0	8,939.5	7,338.0	32.8	32.1	114.88	-1,585.0	-8.4	497.0	438.0	59.00	8.424	
8,700.0	7,130.0	9,039.4	7,338.0	34.4	33.7	114.75	-1,684.9	-8.4	499.4	437.4	61.99	8.055	
13,400.0	7,130.0	13,734.7	7,338.0	114.5	114.3	114.95	-6,380.2	-8.4	497.0	290.2	206.78	2.404	
13,500.0	7,130.0	13,834.3	7,338.0	116.3	116.0	115.38	-6,479.8	-8.4	489.1	279.9	209.23	2.338	
13,600.0	7,130.0	13,933.9	7,338.0	118.0	117.7	115.83	-6,579.4	-8.4	481.2	269.6	211.62	2.274	
13,700.0	7,130.0	14,033.5	7,338.0	119.7	119.5	116.29	-6,679.0	-8.4	473.4	259.4	213.96	2.213	
13,800.0	7,130.0	14,133.1	7,338.0	121.5	121.2	116.76	-6,778.7	-8.4	465.6	249.4	216.23	2.153	
13,900.0	7,130.0	14,232.8	7,338.0	123.2	123.0	117.25	-6,878.3	-8.4	457.8	239.4	218.43	2.096	
14,000.0	7,130.0	14,332.4	7,338.0	124.9	124.7	117.76	-6,977.9	-8.4	450.1	229.5	220.55	2.041	
14,100.0	7,130.0	14,432.0	7,338.0	126.7	126.4	118.29	-7,077.5	-8.4	442.4	219.8	222.60	1.987	
14,200.0	7,130.0	14,531.6	7,338.0	128.4	128.2	118.83	-7,177.1	-8.4	434.7	210.1	224.56	1.936	
14,300.0	7,130.0	14,631.2	7,338.0	130.1	129.9	119.39	-7,276.8	-8.4	427.1	200.6	226.43	1.886	
14,400.0	7,130.0	14,730.9	7,338.0	131.9	131.6	119.98	-7,376.4	-8.4	419.5	191.3	228.20	1.838	
14,500.0	7,130.0	14,830.5	7,338.0	133.6	133.4	120.58	-7,476.0	-8.4	411.9	182.1	229.86	1.792	
14,600.0	7,130.0	14,930.1	7,338.0	135.3	135.1	121.21	-7,575.6	-8.4	404.4	173.0	231.42	1.748	
14,700.0	7,130.0	15,029.7	7,338.0	137.1	136.9	121.86	-7,675.2	-8.4	397.0	164.2	232.85	1.705	
14,787.9	7,130.0	15,117.3	7,338.0	138.6	138.4	122.46	-7,762.8	-8.4	390.5	156.5	234.00	1.669	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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2D-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	19.6	19.6				
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	19.6	19.6	19.3	0.24	80.060	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.59	32.966	CC, ES
300.0	300.0	299.7	299.7	0.5	0.5	89.08	0.3	20.4	20.4	19.4	0.94	21.607	
400.0	400.0	399.3	399.3	0.6	0.7	86.58	1.4	22.7	22.8	21.5	1.29	17.617	
500.0	500.0	498.8	498.7	0.8	0.8	83.44	3.1	26.7	26.9	25.3	1.65	16.305	
600.0	600.0	598.2	597.8	1.0	1.0	11.12	5.5	32.3	31.9	29.9	1.99	16.053	
700.0	700.0	697.4	696.8	1.2	1.3	8.97	8.5	39.4	37.0	34.6	2.34	15.814	
800.0	799.9	796.8	795.7	1.4	1.5	7.23	12.3	48.0	42.0	39.3	2.69	15.630	
900.0	899.7	896.7	895.1	1.5	1.7	5.91	16.3	57.2	46.4	43.4	3.04	15.283	
1,000.0	999.6	996.6	994.5	1.7	2.0	4.82	20.2	66.5	50.8	47.4	3.39	15.005	
1,100.0	1,099.4	1,096.5	1,093.9	1.9	2.2	3.90	24.2	75.7	55.2	51.5	3.73	14.785	
1,200.0	1,199.2	1,196.4	1,193.3	2.1	2.4	3.12	28.2	84.9	59.6	55.6	4.08	14.605	
1,300.0	1,299.1	1,296.3	1,292.7	2.3	2.7	2.45	32.2	94.1	64.1	59.6	4.43	14.457	
1,400.0	1,398.9	1,396.2	1,392.1	2.5	2.9	1.86	36.1	103.3	68.5	63.7	4.78	14.332	
1,500.0	1,498.8	1,496.1	1,491.5	2.7	3.2	1.35	40.1	112.5	73.0	67.8	5.13	14.225	
1,600.0	1,598.6	1,596.0	1,590.9	2.9	3.4	0.89	44.1	121.7	77.4	71.9	5.48	14.133	
1,700.0	1,698.5	1,695.9	1,690.3	3.1	3.7	0.49	48.1	130.9	81.9	76.1	5.83	14.053	
1,800.0	1,798.3	1,795.8	1,789.7	3.3	3.9	0.13	52.1	140.1	86.3	80.2	6.18	13.982	
1,900.0	1,898.2	1,895.7	1,889.0	3.5	4.1	-0.20	56.0	149.3	90.8	84.3	6.52	13.919	
2,000.0	1,998.0	1,995.6	1,988.4	3.7	4.4	-0.50	60.0	158.5	95.3	88.4	6.87	13.863	
2,100.0	2,097.8	2,095.5	2,087.8	3.9	4.6	-0.77	64.0	167.7	99.8	92.5	7.22	13.812	
2,200.0	2,197.7	2,195.4	2,187.2	4.1	4.9	-1.02	68.0	177.0	104.2	96.7	7.57	13.767	
2,300.0	2,297.5	2,295.3	2,286.6	4.3	5.1	-1.24	71.9	186.2	108.7	100.8	7.92	13.725	
2,400.0	2,397.4	2,395.2	2,386.0	4.5	5.4	-1.45	75.9	195.4	113.2	104.9	8.27	13.687	
2,500.0	2,497.2	2,495.1	2,485.4	4.7	5.6	-1.65	79.9	204.6	117.7	109.0	8.62	13.653	
2,600.0	2,597.1	2,595.0	2,584.8	4.9	5.9	-1.82	83.9	213.8	122.1	113.2	8.97	13.621	
2,700.0	2,696.9	2,694.9	2,684.2	5.1	6.1	-1.99	87.9	223.0	126.6	117.3	9.32	13.592	
2,800.0	2,796.8	2,794.8	2,783.6	5.3	6.4	-2.14	91.8	232.2	131.1	121.4	9.67	13.564	
2,900.0	2,896.6	2,894.7	2,883.0	5.5	6.6	-2.29	95.8	241.4	135.6	125.6	10.01	13.539	
3,000.0	2,996.4	2,994.6	2,982.4	5.7	6.9	-2.42	99.8	250.6	140.1	129.7	10.36	13.515	
3,100.0	3,096.3	3,094.5	3,081.8	5.9	7.1	-2.55	103.8	259.8	144.5	133.8	10.71	13.494	
3,200.0	3,196.1	3,194.4	3,181.2	6.1	7.3	-2.67	107.7	269.0	149.0	138.0	11.06	13.473	
3,300.0	3,296.0	3,294.3	3,280.6	6.3	7.6	-2.78	111.7	278.2	153.5	142.1	11.41	13.454	
3,400.0	3,395.8	3,394.2	3,380.0	6.5	7.8	-2.89	115.7	287.5	158.0	146.2	11.76	13.436	
3,500.0	3,495.7	3,494.1	3,479.4	6.7	8.1	-2.99	119.7	296.7	162.5	150.4	12.11	13.419	
3,600.0	3,595.5	3,594.0	3,578.7	6.9	8.3	-3.08	123.7	305.9	167.0	154.5	12.46	13.403	
3,700.0	3,695.4	3,693.9	3,678.1	7.1	8.6	-3.17	127.6	315.1	171.5	158.7	12.81	13.387	
3,800.0	3,795.2	3,793.8	3,777.5	7.3	8.8	-3.26	131.6	324.3	176.0	162.8	13.16	13.373	
3,900.0	3,895.0	3,893.7	3,876.9	7.5	9.1	-3.34	135.6	333.5	180.4	166.9	13.51	13.359	
4,000.0	3,994.9	3,993.6	3,976.3	7.7	9.3	-3.42	139.6	342.7	184.9	171.1	13.86	13.346	
4,100.0	4,094.7	4,093.5	4,075.7	7.9	9.6	-3.49	143.5	351.9	189.4	175.2	14.21	13.334	
4,200.0	4,194.6	4,193.3	4,175.1	8.1	9.8	-3.56	147.5	361.1	193.9	179.4	14.55	13.323	
4,300.0	4,294.4	4,293.2	4,274.5	8.3	10.1	-3.63	151.5	370.3	198.4	183.5	14.90	13.311	
4,400.0	4,394.3	4,393.1	4,373.9	8.5	10.3	-3.69	155.5	379.5	202.9	187.6	15.25	13.301	
4,500.0	4,494.1	4,493.0	4,473.3	8.7	10.6	-3.75	159.5	388.7	207.4	191.8	15.60	13.291	
4,600.0	4,594.0	4,592.9	4,572.7	8.9	10.8	-3.81	163.4	398.0	211.9	195.9	15.95	13.281	
4,700.0	4,693.8	4,692.8	4,672.1	9.1	11.1	-3.87	167.4	407.2	216.4	200.1	16.30	13.272	
4,800.0	4,793.6	4,792.7	4,771.5	9.3	11.3	-3.92	171.4	416.4	220.8	204.2	16.65	13.263	
4,900.0	4,893.5	4,892.6	4,870.9	9.5	11.6	-3.97	175.4	425.6	225.3	208.3	17.00	13.254	
5,000.0	4,993.3	4,992.5	4,970.3	9.7	11.8	-4.02	179.3	434.8	229.8	212.5	17.35	13.246	
5,100.0	5,093.2	5,092.4	5,069.7	9.9	12.0	-4.07	183.3	444.0	234.3	216.6	17.70	13.238	

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 Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2D-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,193.0	5,192.3	5,169.0	10.1	12.3	-4.11	187.3	453.2	238.8	220.8	18.05	13.231	
5,300.0	5,292.9	5,292.2	5,268.4	10.3	12.5	-4.16	191.3	462.4	243.3	224.9	18.40	13.224	
5,400.0	5,392.7	5,392.1	5,367.8	10.5	12.8	-4.20	195.3	471.6	247.8	229.0	18.75	13.217	
5,500.0	5,492.6	5,492.0	5,467.2	10.7	13.0	-4.24	199.2	480.8	252.3	233.2	19.10	13.210	
5,600.0	5,592.4	5,591.9	5,566.6	10.9	13.3	-4.28	203.2	490.0	256.8	237.3	19.45	13.204	
5,700.0	5,692.2	5,691.8	5,666.0	11.1	13.5	-4.32	207.2	499.2	261.3	241.5	19.80	13.197	
5,800.0	5,792.1	5,791.7	5,765.4	11.3	13.8	-4.36	211.2	508.5	265.8	245.6	20.15	13.191	
5,900.0	5,891.9	5,891.6	5,864.8	11.5	14.0	-4.39	215.1	517.7	270.2	249.8	20.50	13.185	
6,000.0	5,991.8	5,991.5	5,964.2	11.7	14.3	-4.43	219.1	526.9	274.7	253.9	20.85	13.180	
6,100.0	6,091.6	6,091.4	6,063.6	11.9	14.5	-4.46	223.1	536.1	279.2	258.0	21.19	13.174	
6,200.0	6,191.5	6,191.3	6,163.0	12.1	14.8	-4.49	227.1	545.3	283.7	262.2	21.54	13.169	
6,300.0	6,291.3	6,291.2	6,262.4	12.3	15.0	-4.53	231.1	554.5	288.2	266.3	21.89	13.164	
6,400.0	6,391.2	6,391.1	6,361.8	12.5	15.3	-4.56	235.0	563.7	292.7	270.5	22.24	13.159	
6,500.0	6,491.0	6,491.0	6,461.2	12.7	15.5	-4.59	239.0	572.9	297.2	274.6	22.59	13.154	
6,600.0	6,590.8	6,590.9	6,560.5	12.9	15.8	-67.62	243.0	582.1	302.2	279.3	22.93	13.179	
6,700.0	6,689.5	6,689.1	6,658.2	13.0	16.0	-99.21	246.9	591.2	312.7	289.4	23.24	13.456	
6,800.0	6,784.2	6,785.8	6,754.5	13.2	16.2	-108.10	250.7	600.1	331.4	307.9	23.49	14.104	
6,900.0	6,872.0	6,928.5	6,895.4	13.4	16.5	-116.01	236.2	613.1	353.3	329.6	23.77	14.865	
7,000.0	6,950.3	7,090.5	7,045.5	13.6	16.6	-121.84	178.2	627.0	370.9	346.9	23.98	15.463	
7,100.0	7,016.6	7,269.7	7,185.3	14.0	16.7	-125.79	68.0	640.0	380.3	356.0	24.26	15.673	
7,200.0	7,069.0	7,457.3	7,288.0	14.6	17.2	-127.71	-87.6	649.5	378.8	354.0	24.77	15.291	
7,300.0	7,105.9	7,640.3	7,335.0	15.3	18.0	-127.56	-263.7	653.9	365.8	340.1	25.76	14.202	
7,400.0	7,126.1	7,763.9	7,338.0	16.2	18.9	-127.12	-387.2	654.1	347.6	321.0	26.59	13.073	
7,500.0	7,130.0	7,863.4	7,338.0	17.2	19.8	-127.96	-486.7	654.1	338.8	311.3	27.45	12.341	
7,600.0	7,130.0	7,963.1	7,338.0	18.4	20.7	-128.79	-586.4	654.1	332.6	303.5	29.15	11.410	
7,700.0	7,130.0	8,062.8	7,338.0	19.6	21.8	-129.65	-686.1	654.1	326.6	295.6	30.92	10.561	
7,800.0	7,130.0	8,162.5	7,338.0	20.9	22.9	-130.55	-785.8	654.1	320.5	287.8	32.72	9.796	
7,900.0	7,130.0	8,262.2	7,338.0	22.3	24.1	-131.45	-885.5	654.1	314.7	280.2	34.49	9.125	
8,000.0	7,130.0	8,362.0	7,338.0	23.7	25.4	-132.20	-985.3	654.1	309.9	273.7	36.20	8.562	
8,100.0	7,130.0	8,461.9	7,338.0	25.1	26.7	-132.76	-1,085.2	654.1	306.5	268.5	37.98	8.069	
8,200.0	7,130.0	8,561.9	7,338.0	26.6	28.1	-133.13	-1,185.1	654.1	304.3	264.4	39.91	7.623	
8,300.0	7,130.0	8,661.8	7,338.0	28.1	29.5	-133.47	-1,285.1	654.1	302.4	260.4	42.00	7.199	
8,400.0	7,130.0	8,761.8	7,338.0	29.7	31.0	-133.82	-1,385.0	654.1	300.5	256.4	44.09	6.815	
8,500.0	7,130.0	8,861.7	7,338.0	31.2	32.5	-134.16	-1,485.0	654.1	298.6	252.4	46.18	6.466	
8,600.0	7,130.0	8,961.7	7,338.0	32.8	34.0	-134.52	-1,585.0	654.1	296.7	248.5	48.26	6.148	
8,700.0	7,130.0	9,061.7	7,338.0	34.4	35.5	-134.87	-1,684.9	654.1	294.9	244.5	50.33	5.858	
8,800.0	7,130.0	9,161.6	7,338.0	36.0	37.1	-135.23	-1,784.9	654.1	293.0	240.6	52.38	5.593	
8,900.0	7,130.0	9,261.6	7,338.0	37.6	38.6	-135.60	-1,884.9	654.1	291.2	236.8	54.42	5.350	
9,000.0	7,130.0	9,361.6	7,338.0	39.3	40.2	-135.97	-1,984.8	654.1	289.3	232.9	56.43	5.127	
9,100.0	7,130.0	9,461.5	7,338.0	40.9	41.8	-136.35	-2,084.8	654.1	287.5	229.1	58.42	4.922	
9,200.0	7,130.0	9,561.5	7,338.0	42.6	43.4	-136.73	-2,184.8	654.1	285.7	225.3	60.38	4.732	
9,300.0	7,130.0	9,661.5	7,338.0	44.2	45.0	-137.11	-2,284.7	654.1	283.9	221.6	62.32	4.556	
9,400.0	7,130.0	9,761.4	7,338.0	45.9	46.7	-137.50	-2,384.7	654.1	282.2	217.9	64.22	4.394	
9,500.0	7,130.0	9,861.4	7,338.0	47.6	48.3	-137.89	-2,484.7	654.1	280.4	214.3	66.09	4.243	
9,600.0	7,130.0	9,961.4	7,338.0	49.2	50.0	-138.29	-2,584.6	654.1	278.7	210.7	67.92	4.103	
9,700.0	7,130.0	10,061.3	7,338.0	50.9	51.6	-138.70	-2,684.6	654.1	276.9	207.2	69.71	3.972	
9,800.0	7,130.0	10,161.3	7,338.0	52.6	53.3	-139.11	-2,784.6	654.1	275.2	203.7	71.47	3.851	
9,900.0	7,130.0	10,261.3	7,338.0	54.3	54.9	-139.52	-2,884.5	654.1	273.5	200.3	73.18	3.737	
10,000.0	7,130.0	10,361.2	7,338.0	56.0	56.6	-139.94	-2,984.5	654.1	271.8	196.9	74.86	3.631	
10,100.0	7,130.0	10,461.2	7,338.0	57.7	58.3	-140.37	-3,084.5	654.1	270.1	193.6	76.48	3.532	
10,200.0	7,130.0	10,561.2	7,338.0	59.4	60.0	-140.80	-3,184.4	654.1	268.5	190.4	78.07	3.439	
10,300.0	7,130.0	10,661.1	7,338.0	61.1	61.6	-141.23	-3,284.4	654.1	266.8	187.2	79.61	3.352	

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2D-5H-E267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,400.0	7,130.0	10,761.1	7,338.0	62.8	63.3	-141.67	-3,384.4	654.1	265.2	184.1	81.09	3.270	
10,500.0	7,130.0	10,861.1	7,338.0	64.5	65.0	-142.12	-3,484.3	654.1	263.6	181.0	82.53	3.194	
10,600.0	7,130.0	10,961.0	7,338.0	66.2	66.7	-142.57	-3,584.3	654.1	262.0	178.0	83.92	3.122	
10,700.0	7,130.0	11,061.0	7,338.0	68.0	68.4	-143.03	-3,684.3	654.1	260.4	175.1	85.25	3.054	
10,800.0	7,130.0	11,161.0	7,338.0	69.7	70.1	-143.49	-3,784.2	654.1	258.8	172.3	86.53	2.991	
10,900.0	7,130.0	11,260.9	7,338.0	71.4	71.8	-143.96	-3,884.2	654.1	257.3	169.5	87.76	2.932	
11,000.0	7,130.0	11,360.9	7,338.0	73.1	73.5	-144.43	-3,984.2	654.1	255.7	166.8	88.92	2.876	
11,100.0	7,130.0	11,460.9	7,338.0	74.8	75.2	-144.91	-4,084.1	654.1	254.2	164.2	90.03	2.824	
11,200.0	7,130.0	11,560.8	7,338.0	76.6	76.9	-145.40	-4,184.1	654.1	252.7	161.6	91.08	2.775	
11,300.0	7,130.0	11,660.8	7,338.0	78.3	78.7	-145.89	-4,284.1	654.1	251.2	159.2	92.06	2.729	
11,400.0	7,130.0	11,760.8	7,338.0	80.0	80.4	-146.39	-4,384.0	654.1	249.8	156.8	92.99	2.686	
11,500.0	7,130.0	11,860.7	7,338.0	81.8	82.1	-146.89	-4,484.0	654.1	248.4	154.5	93.85	2.646	
11,600.0	7,130.0	11,960.7	7,338.0	83.5	83.8	-147.40	-4,583.9	654.1	246.9	152.3	94.64	2.609	
11,700.0	7,130.0	12,060.7	7,338.0	85.2	85.5	-147.91	-4,683.9	654.1	245.5	150.2	95.37	2.575	
11,800.0	7,130.0	12,160.6	7,338.0	86.9	87.2	-148.43	-4,783.9	654.1	244.1	148.1	96.03	2.543	
11,900.0	7,130.0	12,260.6	7,338.0	88.7	89.0	-148.96	-4,883.8	654.1	242.8	146.2	96.61	2.513	
12,000.0	7,130.0	12,360.6	7,338.0	90.4	90.7	-149.47	-4,983.8	654.1	241.5	144.4	97.14	2.486	
12,100.0	7,130.0	12,460.5	7,338.0	92.1	92.4	-149.70	-5,083.8	654.1	240.9	142.7	98.17	2.454	
12,117.0	7,130.0	12,477.5	7,338.0	92.4	92.7	-149.71	-5,100.8	654.1	240.9	142.5	98.43	2.447	
12,200.0	7,130.0	12,560.5	7,338.0	93.9	94.1	-149.59	-5,183.8	654.1	241.2	141.2	100.04	2.411	
12,300.0	7,130.0	12,660.5	7,338.0	95.6	95.9	-149.12	-5,283.8	654.1	242.4	139.6	102.79	2.358	
12,400.0	7,130.0	12,760.4	7,338.0	97.3	97.6	-148.32	-5,383.7	654.1	244.5	138.1	106.43	2.297	
12,500.0	7,130.0	12,860.3	7,338.0	99.0	99.3	-147.21	-5,483.5	654.1	247.6	136.7	110.93	2.232	
12,600.0	7,130.0	12,960.0	7,338.0	100.8	101.0	-145.80	-5,583.2	654.1	251.8	135.5	116.22	2.166	
12,700.0	7,130.0	13,059.6	7,338.0	102.5	102.8	-144.21	-5,682.9	654.1	256.8	134.4	122.37	2.098	
12,800.0	7,130.0	13,159.2	7,338.0	104.2	104.5	-142.66	-5,782.5	654.1	262.0	133.4	128.54	2.038	
12,900.0	7,130.0	13,258.8	7,338.0	105.9	106.2	-141.18	-5,882.1	654.1	267.4	132.8	134.62	1.986	
13,000.0	7,130.0	13,358.5	7,338.0	107.6	107.9	-139.76	-5,981.7	654.1	272.9	132.3	140.61	1.941	
13,100.0	7,130.0	13,458.1	7,338.0	109.4	109.7	-138.39	-6,081.3	654.1	278.7	132.1	146.52	1.902	
13,200.0	7,130.0	13,557.7	7,338.0	111.1	111.4	-137.08	-6,180.9	654.1	284.5	132.2	152.33	1.868	
13,300.0	7,130.0	13,657.3	7,338.0	112.8	113.1	-135.82	-6,280.6	654.1	290.6	132.5	158.05	1.838	
13,400.0	7,130.0	13,756.9	7,338.0	114.5	114.8	-134.62	-6,380.2	654.1	296.7	133.0	163.69	1.813	
13,500.0	7,130.0	13,856.5	7,338.0	116.3	116.6	-133.46	-6,479.8	654.1	303.0	133.8	169.23	1.791	
13,600.0	7,130.0	13,956.2	7,338.0	118.0	118.3	-132.35	-6,579.4	654.1	309.4	134.7	174.68	1.771	
13,700.0	7,130.0	14,055.8	7,338.0	119.7	120.0	-131.29	-6,679.0	654.1	315.9	135.9	180.05	1.755	
13,800.0	7,130.0	14,155.4	7,338.0	121.5	121.8	-130.27	-6,778.7	654.1	322.5	137.2	185.34	1.740	
13,900.0	7,130.0	14,255.0	7,338.0	123.2	123.5	-129.29	-6,878.3	654.1	329.2	138.7	190.55	1.728	
14,000.0	7,130.0	14,354.6	7,338.0	124.9	125.2	-128.35	-6,977.9	654.1	336.1	140.4	195.68	1.717	
14,100.0	7,130.0	14,454.3	7,338.0	126.7	126.9	-127.44	-7,077.5	654.1	342.9	142.2	200.74	1.708	
14,200.0	7,130.0	14,553.9	7,338.0	128.4	128.7	-126.58	-7,177.1	654.1	349.9	144.2	205.73	1.701	
14,300.0	7,130.0	14,653.5	7,338.0	130.1	130.4	-125.74	-7,276.8	654.1	357.0	146.3	210.65	1.695	
14,400.0	7,130.0	14,753.1	7,338.0	131.9	132.1	-124.94	-7,376.4	654.1	364.1	148.6	215.51	1.689	
14,500.0	7,130.0	14,852.7	7,338.0	133.6	133.9	-124.17	-7,476.0	654.1	371.3	151.0	220.31	1.685	
14,600.0	7,130.0	14,952.4	7,338.0	135.3	135.6	-123.43	-7,575.6	654.1	378.5	153.5	225.05	1.682	
14,700.0	7,130.0	15,052.0	7,338.0	137.1	137.3	-122.72	-7,675.2	654.1	385.9	156.1	229.74	1.680	
14,787.9	7,130.0	15,135.9	7,338.0	138.6	138.8	-122.14	-7,759.1	654.1	392.4	158.7	233.70	1.679	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - Vogl-McCoy 2E-5H-F267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,700.0	7,130.0	11,864.0	7,130.0	85.2	86.1	-87.24	-4,690.0	1,021.3	498.2	329.6	168.58	2.955	
11,800.0	7,130.0	11,963.9	7,130.0	86.9	87.8	-87.22	-4,789.9	1,020.1	494.4	322.3	172.05	2.873	
11,900.0	7,130.0	12,063.9	7,130.0	88.7	89.5	-87.19	-4,889.8	1,018.8	490.5	315.0	175.51	2.795	
12,000.0	7,130.0	12,163.8	7,130.0	90.4	91.2	-87.17	-4,989.7	1,017.6	486.8	307.8	179.04	2.719	
12,100.0	7,130.0	12,263.8	7,130.0	92.1	92.9	-87.16	-5,089.7	1,016.4	484.4	301.8	182.68	2.652	
12,186.5	7,130.0	12,350.3	7,130.0	93.6	94.4	-87.16	-5,176.2	1,015.4	483.8	298.0	185.80	2.604	CC
12,200.0	7,130.0	12,363.8	7,130.0	93.9	94.6	-87.16	-5,189.7	1,015.2	483.8	297.5	186.28	2.597	
12,300.0	7,130.0	12,463.8	7,130.0	95.6	96.3	-87.16	-5,289.7	1,014.0	484.9	295.1	189.82	2.555	
12,400.0	7,130.0	12,563.7	7,130.0	97.3	98.0	-87.18	-5,389.6	1,012.8	487.8	294.5	193.31	2.523	ES
12,500.0	7,130.0	12,663.6	7,130.0	99.0	99.8	-87.20	-5,489.5	1,011.6	492.4	295.6	196.74	2.503	
12,600.0	7,130.0	12,763.4	7,130.0	100.8	101.5	-87.23	-5,589.3	1,010.4	498.7	298.6	200.12	2.492	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2C-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4866.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4866.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2C-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 4866.0ft (Ensign)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Vogl-McCoy 2C-5H-E267
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.37°