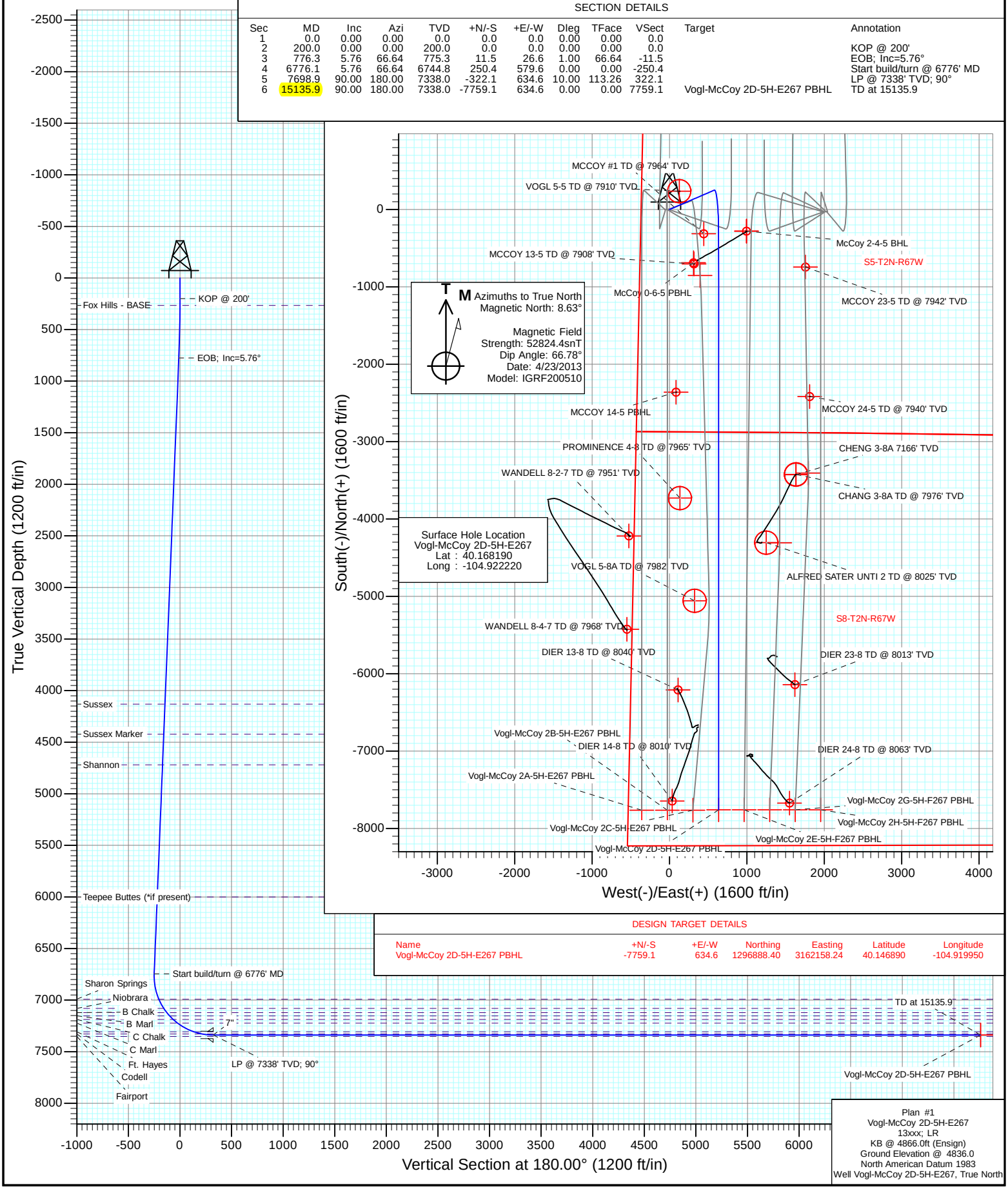
encana

Project: DJ Wattenberg
Site: S5-T2N-R67W (Vogl-McCoy)
Well: Vogl-McCoy 2D-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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0		KOP @ 200'
3	776.3	5.76	66.64	775.3	11.5	26.6	1.00	66.64	-11.5		EOB; Inc=5.76°
4	6776.1	5.76	66.64	6744.8	250.4	579.6	0.00	0.00	-250.4		Start build/turn @ 6776' MD
5	7698.9	90.00	180.00	7338.0	-322.1	634.6	10.00	113.26	322.1		LP @ 7338' TVD; 90°
6	15135.9	90.00	180.00	7338.0	-7759.1	634.6	0.00	0.00	7759.1	Vogl-McCoy 2D-5H-E267 PBHL	TD at 15135.9



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Vogl-McCoy 2D-5H-E267 PBHL	-7759.1	634.6	1296888.40	3162158.24	40.146890	-104.919950

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

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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 2D-5H-E267

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,304,643.23 ft	**Latitude:**	40.168190
	+E/-W	0.0 ft	**Easting:**	3,161,473.12 ft	**Longitude:**	-104.922220
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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
776.3	5.76	66.64	775.3	11.5	26.6	1.00	1.00	0.00	66.64	
6,776.1	5.76	66.64	6,744.8	250.4	579.6	0.00	0.00	0.00	0.00	
7,698.9	90.00	180.00	7,338.0	-322.1	634.6	10.00	9.13	12.28	113.26	
15,135.9	90.00	180.00	7,338.0	-7,759.1	634.6	0.00	0.00	0.00	0.00	Vogl-McCoy 2D-5H-E

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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	KOP @ 200'
266.0	0.66	66.64	266.0	0.2	0.3	-0.2	1.00	1.00	Fox Hills - BASE
300.0	1.00	66.64	300.0	0.3	0.8	-0.3	1.00	1.00	
400.0	2.00	66.64	400.0	1.4	3.2	-1.4	1.00	1.00	
500.0	3.00	66.64	499.9	3.1	7.2	-3.1	1.00	1.00	
600.0	4.00	66.64	599.7	5.5	12.8	-5.5	1.00	1.00	
700.0	5.00	66.64	699.4	8.6	20.0	-8.6	1.00	1.00	
776.3	5.76	66.64	775.3	11.5	26.6	-11.5	1.00	1.00	EOB; Inc=5.76°
800.0	5.76	66.64	798.9	12.4	28.8	-12.4	0.00	0.00	
900.0	5.76	66.64	898.4	16.4	38.0	-16.4	0.00	0.00	
1,000.0	5.76	66.64	997.9	20.4	47.2	-20.4	0.00	0.00	
1,100.0	5.76	66.64	1,097.4	24.4	56.4	-24.4	0.00	0.00	
1,200.0	5.76	66.64	1,196.9	28.4	65.6	-28.4	0.00	0.00	
1,300.0	5.76	66.64	1,296.4	32.3	74.9	-32.3	0.00	0.00	
1,400.0	5.76	66.64	1,395.9	36.3	84.1	-36.3	0.00	0.00	
1,500.0	5.76	66.64	1,495.4	40.3	93.3	-40.3	0.00	0.00	
1,600.0	5.76	66.64	1,594.9	44.3	102.5	-44.3	0.00	0.00	
1,700.0	5.76	66.64	1,694.4	48.3	111.7	-48.3	0.00	0.00	
1,800.0	5.76	66.64	1,793.9	52.2	120.9	-52.2	0.00	0.00	
1,900.0	5.76	66.64	1,893.3	56.2	130.2	-56.2	0.00	0.00	
2,000.0	5.76	66.64	1,992.8	60.2	139.4	-60.2	0.00	0.00	
2,100.0	5.76	66.64	2,092.3	64.2	148.6	-64.2	0.00	0.00	
2,200.0	5.76	66.64	2,191.8	68.2	157.8	-68.2	0.00	0.00	
2,300.0	5.76	66.64	2,291.3	72.2	167.0	-72.2	0.00	0.00	
2,400.0	5.76	66.64	2,390.8	76.1	176.3	-76.1	0.00	0.00	
2,500.0	5.76	66.64	2,490.3	80.1	185.5	-80.1	0.00	0.00	
2,600.0	5.76	66.64	2,589.8	84.1	194.7	-84.1	0.00	0.00	
2,700.0	5.76	66.64	2,689.3	88.1	203.9	-88.1	0.00	0.00	
2,800.0	5.76	66.64	2,788.8	92.1	213.1	-92.1	0.00	0.00	
2,900.0	5.76	66.64	2,888.3	96.0	222.3	-96.0	0.00	0.00	
3,000.0	5.76	66.64	2,987.8	100.0	231.6	-100.0	0.00	0.00	
3,100.0	5.76	66.64	3,087.3	104.0	240.8	-104.0	0.00	0.00	
3,200.0	5.76	66.64	3,186.8	108.0	250.0	-108.0	0.00	0.00	
3,300.0	5.76	66.64	3,286.3	112.0	259.2	-112.0	0.00	0.00	
3,400.0	5.76	66.64	3,385.8	116.0	268.4	-116.0	0.00	0.00	
3,500.0	5.76	66.64	3,485.3	119.9	277.6	-119.9	0.00	0.00	
3,600.0	5.76	66.64	3,584.8	123.9	286.9	-123.9	0.00	0.00	
3,700.0	5.76	66.64	3,684.3	127.9	296.1	-127.9	0.00	0.00	
3,800.0	5.76	66.64	3,783.7	131.9	305.3	-131.9	0.00	0.00	
3,900.0	5.76	66.64	3,883.2	135.9	314.5	-135.9	0.00	0.00	
4,000.0	5.76	66.64	3,982.7	139.8	323.7	-139.8	0.00	0.00	
4,100.0	5.76	66.64	4,082.2	143.8	333.0	-143.8	0.00	0.00	
4,149.0	5.76	66.64	4,131.0	145.8	337.5	-145.8	0.00	0.00	Sussex
4,200.0	5.76	66.64	4,181.7	147.8	342.2	-147.8	0.00	0.00	
4,300.0	5.76	66.64	4,281.2	151.8	351.4	-151.8	0.00	0.00	
4,400.0	5.76	66.64	4,380.7	155.8	360.6	-155.8	0.00	0.00	
4,441.5	5.76	66.64	4,422.0	157.4	364.4	-157.4	0.00	0.00	Sussex Marker
4,500.0	5.76	66.64	4,480.2	159.8	369.8	-159.8	0.00	0.00	
4,600.0	5.76	66.64	4,579.7	163.7	379.0	-163.7	0.00	0.00	
4,700.0	5.76	66.64	4,679.2	167.7	388.3	-167.7	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 2D-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
4,740.0	5.76	66.64	4,719.0	169.3	391.9	-169.3	0.00	0.00	Shannon
4,800.0	5.76	66.64	4,778.7	171.7	397.5	-171.7	0.00	0.00	
4,900.0	5.76	66.64	4,878.2	175.7	406.7	-175.7	0.00	0.00	
5,000.0	5.76	66.64	4,977.7	179.7	415.9	-179.7	0.00	0.00	
5,100.0	5.76	66.64	5,077.2	183.6	425.1	-183.6	0.00	0.00	
5,200.0	5.76	66.64	5,176.7	187.6	434.3	-187.6	0.00	0.00	
5,300.0	5.76	66.64	5,276.2	191.6	443.6	-191.6	0.00	0.00	
5,400.0	5.76	66.64	5,375.7	195.6	452.8	-195.6	0.00	0.00	
5,500.0	5.76	66.64	5,475.2	199.6	462.0	-199.6	0.00	0.00	
5,600.0	5.76	66.64	5,574.7	203.5	471.2	-203.5	0.00	0.00	
5,700.0	5.76	66.64	5,674.1	207.5	480.4	-207.5	0.00	0.00	
5,800.0	5.76	66.64	5,773.6	211.5	489.7	-211.5	0.00	0.00	
5,900.0	5.76	66.64	5,873.1	215.5	498.9	-215.5	0.00	0.00	
6,000.0	5.76	66.64	5,972.6	219.5	508.1	-219.5	0.00	0.00	
6,027.5	5.76	66.64	6,000.0	220.6	510.6	-220.6	0.00	0.00	Teepee Buttes (*if present)
6,100.0	5.76	66.64	6,072.1	223.5	517.3	-223.5	0.00	0.00	
6,200.0	5.76	66.64	6,171.6	227.4	526.5	-227.4	0.00	0.00	
6,300.0	5.76	66.64	6,271.1	231.4	535.7	-231.4	0.00	0.00	
6,400.0	5.76	66.64	6,370.6	235.4	545.0	-235.4	0.00	0.00	
6,500.0	5.76	66.64	6,470.1	239.4	554.2	-239.4	0.00	0.00	
6,600.0	5.76	66.64	6,569.6	243.4	563.4	-243.4	0.00	0.00	
6,700.0	5.76	66.64	6,669.1	247.3	572.6	-247.3	0.00	0.00	
6,776.1	5.76	66.64	6,744.8	250.4	579.6	-250.4	0.00	0.00	Start build/turn @ 6776' MD
6,800.0	5.29	91.21	6,768.6	250.8	581.8	-250.8	10.00	-1.96	
6,900.0	11.40	152.65	6,867.7	241.9	591.0	-241.9	10.00	6.11	
7,000.0	20.77	165.86	6,963.7	215.9	599.9	-215.9	10.00	9.37	
7,029.5	23.63	167.78	6,991.0	205.0	602.4	-205.0	10.00	9.70	Sharon Springs
7,100.0	30.53	170.96	7,053.7	173.5	608.2	-173.5	10.00	9.79	
7,131.0	33.59	171.98	7,080.0	157.2	610.7	-157.2	10.00	9.85	Niobrara
7,180.5	38.47	173.30	7,120.0	128.4	614.4	-128.4	10.00	9.88	B Chalk
7,200.0	40.40	173.75	7,135.1	116.1	615.8	-116.1	10.00	9.89	
7,224.0	42.78	174.25	7,153.0	100.2	617.4	-100.2	10.00	9.90	B Marl
7,270.7	47.41	175.12	7,186.0	67.3	620.5	-67.3	10.00	9.91	C Chalk
7,300.0	50.32	175.59	7,205.2	45.3	622.3	-45.3	10.00	9.92	
7,328.7	53.16	176.02	7,223.0	22.8	623.9	-22.8	10.00	9.93	C Marl
7,400.0	60.25	176.97	7,262.1	-36.6	627.6	36.6	10.00	9.94	
7,500.0	70.20	178.09	7,304.0	-127.2	631.4	127.2	10.00	9.95	
7,506.1	70.80	178.15	7,306.0	-132.9	631.6	132.9	10.00	9.95	Ft. Hayes
7,591.4	79.30	179.00	7,328.0	-215.3	633.7	215.3	10.00	9.95	Codell
7,600.0	80.15	179.08	7,329.5	-223.7	633.8	223.7	10.00	9.96	
7,698.1	89.92	179.99	7,338.0	-321.3	634.6	321.3	10.00	9.96	7"
7,698.9	90.00	180.00	7,338.0	-322.1	634.6	322.1	10.00	9.96	LP @ 7338' TVD; 90°
7,700.0	90.00	180.00	7,338.0	-323.2	634.6	323.2	0.00	0.00	
7,800.0	90.00	180.00	7,338.0	-423.2	634.6	423.2	0.00	0.00	
7,900.0	90.00	180.00	7,338.0	-523.2	634.6	523.2	0.00	0.00	
8,000.0	90.00	180.00	7,338.0	-623.2	634.6	623.2	0.00	0.00	
8,100.0	90.00	180.00	7,338.0	-723.2	634.6	723.2	0.00	0.00	
8,200.0	90.00	180.00	7,338.0	-823.2	634.6	823.2	0.00	0.00	
8,300.0	90.00	180.00	7,338.0	-923.2	634.6	923.2	0.00	0.00	
8,400.0	90.00	180.00	7,338.0	-1,023.2	634.6	1,023.2	0.00	0.00	
8,500.0	90.00	180.00	7,338.0	-1,123.2	634.6	1,123.2	0.00	0.00	
8,600.0	90.00	180.00	7,338.0	-1,223.2	634.6	1,223.2	0.00	0.00	

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Well:	Vogl-McCoy 2D-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
8,700.0	90.00	180.00	7,338.0	-1,323.2	634.6	1,323.2	0.00	0.00	
8,800.0	90.00	180.00	7,338.0	-1,423.2	634.6	1,423.2	0.00	0.00	
8,900.0	90.00	180.00	7,338.0	-1,523.2	634.6	1,523.2	0.00	0.00	
9,000.0	90.00	180.00	7,338.0	-1,623.2	634.6	1,623.2	0.00	0.00	
9,100.0	90.00	180.00	7,338.0	-1,723.2	634.6	1,723.2	0.00	0.00	
9,200.0	90.00	180.00	7,338.0	-1,823.2	634.6	1,823.2	0.00	0.00	
9,300.0	90.00	180.00	7,338.0	-1,923.2	634.6	1,923.2	0.00	0.00	
9,400.0	90.00	180.00	7,338.0	-2,023.2	634.6	2,023.2	0.00	0.00	
9,500.0	90.00	180.00	7,338.0	-2,123.2	634.6	2,123.2	0.00	0.00	
9,600.0	90.00	180.00	7,338.0	-2,223.2	634.6	2,223.2	0.00	0.00	
9,700.0	90.00	180.00	7,338.0	-2,323.2	634.6	2,323.2	0.00	0.00	
9,800.0	90.00	180.00	7,338.0	-2,423.2	634.6	2,423.2	0.00	0.00	
9,900.0	90.00	180.00	7,338.0	-2,523.2	634.6	2,523.2	0.00	0.00	
10,000.0	90.00	180.00	7,338.0	-2,623.2	634.6	2,623.2	0.00	0.00	
10,100.0	90.00	180.00	7,338.0	-2,723.2	634.6	2,723.2	0.00	0.00	
10,200.0	90.00	180.00	7,338.0	-2,823.2	634.6	2,823.2	0.00	0.00	
10,300.0	90.00	180.00	7,338.0	-2,923.2	634.6	2,923.2	0.00	0.00	
10,400.0	90.00	180.00	7,338.0	-3,023.2	634.6	3,023.2	0.00	0.00	
10,500.0	90.00	180.00	7,338.0	-3,123.2	634.6	3,123.2	0.00	0.00	
10,600.0	90.00	180.00	7,338.0	-3,223.2	634.6	3,223.2	0.00	0.00	
10,700.0	90.00	180.00	7,338.0	-3,323.2	634.6	3,323.2	0.00	0.00	
10,800.0	90.00	180.00	7,338.0	-3,423.2	634.6	3,423.2	0.00	0.00	
10,900.0	90.00	180.00	7,338.0	-3,523.2	634.6	3,523.2	0.00	0.00	
11,000.0	90.00	180.00	7,338.0	-3,623.2	634.6	3,623.2	0.00	0.00	
11,100.0	90.00	180.00	7,338.0	-3,723.2	634.6	3,723.2	0.00	0.00	
11,200.0	90.00	180.00	7,338.0	-3,823.2	634.6	3,823.2	0.00	0.00	
11,300.0	90.00	180.00	7,338.0	-3,923.2	634.6	3,923.2	0.00	0.00	
11,400.0	90.00	180.00	7,338.0	-4,023.2	634.6	4,023.2	0.00	0.00	
11,500.0	90.00	180.00	7,338.0	-4,123.2	634.6	4,123.2	0.00	0.00	
11,600.0	90.00	180.00	7,338.0	-4,223.2	634.6	4,223.2	0.00	0.00	
11,700.0	90.00	180.00	7,338.0	-4,323.2	634.6	4,323.2	0.00	0.00	
11,800.0	90.00	180.00	7,338.0	-4,423.2	634.6	4,423.2	0.00	0.00	
11,900.0	90.00	180.00	7,338.0	-4,523.2	634.6	4,523.2	0.00	0.00	
12,000.0	90.00	180.00	7,338.0	-4,623.2	634.6	4,623.2	0.00	0.00	
12,100.0	90.00	180.00	7,338.0	-4,723.2	634.6	4,723.2	0.00	0.00	
12,200.0	90.00	180.00	7,338.0	-4,823.2	634.6	4,823.2	0.00	0.00	
12,300.0	90.00	180.00	7,338.0	-4,923.2	634.6	4,923.2	0.00	0.00	
12,400.0	90.00	180.00	7,338.0	-5,023.2	634.6	5,023.2	0.00	0.00	
12,500.0	90.00	180.00	7,338.0	-5,123.2	634.6	5,123.2	0.00	0.00	
12,600.0	90.00	180.00	7,338.0	-5,223.2	634.6	5,223.2	0.00	0.00	
12,700.0	90.00	180.00	7,338.0	-5,323.2	634.6	5,323.2	0.00	0.00	
12,800.0	90.00	180.00	7,338.0	-5,423.2	634.6	5,423.2	0.00	0.00	
12,900.0	90.00	180.00	7,338.0	-5,523.2	634.6	5,523.2	0.00	0.00	
13,000.0	90.00	180.00	7,338.0	-5,623.2	634.6	5,623.2	0.00	0.00	
13,100.0	90.00	180.00	7,338.0	-5,723.2	634.6	5,723.2	0.00	0.00	
13,200.0	90.00	180.00	7,338.0	-5,823.2	634.6	5,823.2	0.00	0.00	
13,300.0	90.00	180.00	7,338.0	-5,923.2	634.6	5,923.2	0.00	0.00	
13,400.0	90.00	180.00	7,338.0	-6,023.2	634.6	6,023.2	0.00	0.00	
13,500.0	90.00	180.00	7,338.0	-6,123.2	634.6	6,123.2	0.00	0.00	
13,600.0	90.00	180.00	7,338.0	-6,223.2	634.6	6,223.2	0.00	0.00	
13,700.0	90.00	180.00	7,338.0	-6,323.2	634.6	6,323.2	0.00	0.00	
13,800.0	90.00	180.00	7,338.0	-6,423.2	634.6	6,423.2	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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
13,900.0	90.00	180.00	7,338.0	-6,523.2	634.6	6,523.2	0.00	0.00	
14,000.0	90.00	180.00	7,338.0	-6,623.2	634.6	6,623.2	0.00	0.00	
14,100.0	90.00	180.00	7,338.0	-6,723.2	634.6	6,723.2	0.00	0.00	
14,200.0	90.00	180.00	7,338.0	-6,823.2	634.6	6,823.2	0.00	0.00	
14,300.0	90.00	180.00	7,338.0	-6,923.2	634.6	6,923.2	0.00	0.00	
14,400.0	90.00	180.00	7,338.0	-7,023.2	634.6	7,023.2	0.00	0.00	
14,500.0	90.00	180.00	7,338.0	-7,123.2	634.6	7,123.2	0.00	0.00	
14,600.0	90.00	180.00	7,338.0	-7,223.2	634.6	7,223.2	0.00	0.00	
14,700.0	90.00	180.00	7,338.0	-7,323.2	634.6	7,323.2	0.00	0.00	
14,800.0	90.00	180.00	7,338.0	-7,423.2	634.6	7,423.2	0.00	0.00	
14,900.0	90.00	180.00	7,338.0	-7,523.2	634.6	7,523.2	0.00	0.00	
15,000.0	90.00	180.00	7,338.0	-7,623.2	634.6	7,623.2	0.00	0.00	
15,100.0	90.00	180.00	7,338.0	-7,723.2	634.6	7,723.2	0.00	0.00	
15,135.9	90.00	180.00	7,338.0	-7,759.1	634.6	7,759.1	0.00	0.00	TD at 15135.9 - Vogl-McCoy 2D-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 2D-5H-E26 - plan hits target center - Point	0.00	0.00	7,338.0	-7,759.1	634.6	1,296,888.40	3,162,158.24	40.146890	-104.919950

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
7,698.1	7,338.0	7"	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
266.0	266.0	Fox Hills - BASE			
4,149.0	4,131.0	Sussex			
4,441.5	4,422.0	Sussex Marker			
4,740.0	4,719.0	Shannon			
6,027.5	6,000.0	Teepee Buttes (*if present)			
7,029.5	6,991.0	Sharon Springs			
7,131.0	7,080.0	Niobrara			
7,180.5	7,120.0	B Chalk			
7,224.0	7,153.0	B Marl			
7,270.7	7,186.0	C Chalk			
7,328.7	7,223.0	C Marl			
7,506.1	7,306.0	Ft. Hayes			
7,591.4	7,328.0	Codell			

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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
200.0	200.0	0.0	0.0	KOP @ 200'
776.3	775.3	11.5	26.6	EOB; Inc=5.76°
6,776.1	6,744.8	250.4	579.6	Start build/turn @ 6776' MD
7,698.9	7,338.0	-322.1	634.6	LP @ 7338' TVD; 90°
15,135.9	7,338.0	-7,759.1	634.6	TD at 15135.9

EnCana Oil & Gas (USA) Inc

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

Anticollision Report

22 May, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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	15,135.9	Plan #1 (Hz)	MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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
ALFRED SATER UNIT 2 (EXISTING) - KMG WELL - NO						Out of range
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 - SURVEYS	13,780.0	7,375.9	438.9	312.0	3.461	CC, ES, SF
DIER 14-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 14-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 24-8 (EXISTING) - ENCANA WELL - SURVEYS						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 - Plan #1						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	7,690.4	7,351.0	191.9	164.5	7.000	CC, ES
MCCOY #1 (EXISTING) - ENCANA WELL - NO SURVEY	7,700.0	7,351.0	192.1	164.6	6.991	SF
MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURV	8,065.2	7,430.0	324.4	292.7	10.239	CC, ES
MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURV	8,100.0	7,430.0	326.2	294.1	10.156	SF
MCCOY 13-5 (EXISTING) - ENCANA WELL - NO SURV	8,080.5	7,329.0	318.2	286.5	10.039	CC, ES
MCCOY 13-5 (EXISTING) - ENCANA WELL - NO SURV	8,100.0	7,329.0	318.8	286.9	9.979	SF
MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
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 - SURVEYS	7,661.0	7,389.1	358.7	329.8	12.421	CC, ES
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS	7,700.0	7,390.2	360.9	331.7	12.362	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						Out of range
PROMINENCE 4-8 (EXISTING) - KMG WELL - NO SUR						Out of range
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	2,573.0	2,537.0	167.6	157.3	16.361	CC
VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS	2,600.0	2,563.8	167.6	157.2	16.185	ES
VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS	3,500.0	3,459.3	191.7	178.0	13.982	SF
VOGL 5-8A (EXISTING) - KMG WELL - NO SURVEYS	12,434.0	7,372.0	310.1	205.9	2.978	CC, ES, SF
Vogl-Geist 2A-5H-E267 - Hz - Plan #1	200.0	200.0	50.3	49.7	84.770	CC, ES
Vogl-Geist 2A-5H-E267 - Hz - Plan #1	700.0	697.9	75.4	73.1	32.152	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 2D-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 2D-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 2B-5H-E267 - Hz - Plan #1	200.0	200.0	30.7	30.1	51.804	CC, ES
Vogl-Geist 2B-5H-E267 - Hz - Plan #1	7,100.0	7,288.1	186.0	160.2	7.218	SF
Vogl-Geist 2C-5H-E267 - Hz - Plan #1	200.0	200.0	11.2	10.6	18.838	CC, ES
Vogl-Geist 2C-5H-E267 - Hz - Plan #1	7,364.6	7,358.9	161.5	135.9	6.295	SF
Vogl-Geist 2D-5H-F267 - Hz - Plan #1						Out of range
Vogl-Geist 2D-5H-F267 - Hz - Plan #1						Out of range
Vogl-Geist 2E-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	58.7	58.1	99.190	CC, ES
Vogl-McCoy 2A-5H-E267 - Hz - Plan #1	3,600.0	3,567.6	487.3	474.1	36.985	SF
Vogl-McCoy 2B-5H-E267 - Hz - Plan #1	200.0	199.0	39.1	38.5	66.126	CC, ES
Vogl-McCoy 2B-5H-E267 - Hz - Plan #1	700.0	698.4	59.8	57.4	25.560	SF
Vogl-McCoy 2C-5H-E267 - Hz - Plan #1	200.0	200.0	19.6	19.0	32.966	CC, ES
Vogl-McCoy 2C-5H-E267 - Hz - Plan #1	15,135.9	14,755.2	391.0	155.9	1.663	SF
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	15,135.9	14,933.4	403.3	175.6	1.771	CC
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	15,135.9	14,933.4	403.3	175.6	1.771	ES, SF
Vogl-McCoy 2F-5H-F267 - Hz - Plan #1						Out of range
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 2D-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 2D-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
13,600.0	7,338.0	7,441.0	7,386.6	112.1	14.3	88.60	-6,378.5	191.5	469.7	344.2	125.44	3.744	
13,700.0	7,338.0	7,404.4	7,353.2	113.9	14.1	84.22	-6,392.3	197.1	445.1	318.6	126.47	3.519	
13,780.0	7,338.0	7,375.9	7,327.3	115.2	14.0	80.80	-6,403.3	201.4	438.9	312.0	126.82	3.461	CC, ES, SF
13,800.0	7,338.0	7,368.1	7,320.2	115.6	14.0	79.86	-6,406.4	202.5	439.2	312.4	126.80	3.464	
13,900.0	7,338.0	7,333.6	7,288.7	117.3	13.8	75.71	-6,419.6	207.6	452.7	326.2	126.53	3.578	
14,000.0	7,338.0	7,301.7	7,259.4	119.1	13.7	71.91	-6,431.4	212.0	484.2	358.4	125.83	3.848	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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
1,500.0	1,495.4	1,508.4	1,508.4	3.2	2.6	68.86	-314.0	442.7	497.6	491.9	5.71	87.081	
1,600.0	1,594.9	1,607.9	1,607.9	3.4	2.8	69.94	-314.0	442.7	494.0	487.9	6.13	80.563	
1,700.0	1,694.4	1,707.4	1,707.4	3.7	3.0	71.04	-314.0	442.7	490.6	484.1	6.55	74.885	
1,800.0	1,793.9	1,806.9	1,806.9	3.9	3.1	72.15	-314.0	442.7	487.5	480.5	6.97	69.903	
1,900.0	1,893.3	1,906.3	1,906.3	4.2	3.3	73.27	-314.0	442.7	484.5	477.1	7.40	65.502	
2,000.0	1,992.8	2,005.8	2,005.8	4.4	3.5	74.41	-314.0	442.7	481.7	473.8	7.82	61.593	
2,100.0	2,092.3	2,105.3	2,105.3	4.6	3.7	75.56	-314.0	442.7	479.0	470.8	8.24	58.102	
2,200.0	2,191.8	2,204.8	2,204.8	4.9	3.8	76.73	-314.0	442.7	476.6	468.0	8.67	54.971	
2,300.0	2,291.3	2,304.3	2,304.3	5.1	4.0	77.90	-314.0	442.7	474.4	465.3	9.10	52.151	
2,400.0	2,390.8	2,403.8	2,403.8	5.4	4.2	79.09	-314.0	442.7	472.4	462.9	9.52	49.603	
2,500.0	2,490.3	2,503.3	2,503.3	5.6	4.4	80.28	-314.0	442.7	470.6	460.6	9.95	47.294	
2,600.0	2,589.8	2,602.8	2,602.8	5.9	4.5	81.48	-314.0	442.7	469.0	458.6	10.38	45.194	
2,700.0	2,689.3	2,702.3	2,702.3	6.1	4.7	82.69	-314.0	442.7	467.6	456.8	10.80	43.280	
2,800.0	2,788.8	2,801.8	2,801.8	6.4	4.9	83.91	-314.0	442.7	466.4	455.2	11.23	41.532	
2,900.0	2,888.3	2,901.3	2,901.3	6.6	5.0	85.13	-314.0	442.7	465.5	453.8	11.66	39.932	
3,000.0	2,987.8	3,000.8	3,000.8	6.9	5.2	86.36	-314.0	442.7	464.7	452.6	12.08	38.465	
3,100.0	3,087.3	3,100.3	3,100.3	7.1	5.4	87.59	-314.0	442.7	464.2	451.7	12.51	37.118	
3,200.0	3,186.8	3,199.8	3,199.8	7.4	5.6	88.83	-314.0	442.7	463.9	450.9	12.93	35.879	
3,295.2	3,281.5	3,294.5	3,294.5	7.6	5.7	90.00	-314.0	442.7	463.8	450.4	13.33	34.791	
3,300.0	3,286.3	3,299.3	3,299.3	7.6	5.7	90.06	-314.0	442.7	463.8	450.4	13.35	34.739	
3,400.0	3,385.8	3,398.8	3,398.8	7.9	5.9	91.29	-314.0	442.7	463.9	450.1	13.77	33.688	
3,500.0	3,485.3	3,498.3	3,498.3	8.1	6.1	92.53	-314.0	442.7	464.2	450.0	14.19	32.718	
3,600.0	3,584.8	3,597.8	3,597.8	8.4	6.3	93.76	-314.0	442.7	464.8	450.2	14.61	31.823	
3,700.0	3,684.3	3,697.3	3,697.3	8.6	6.4	94.98	-314.0	442.7	465.5	450.5	15.02	30.996	
3,800.0	3,783.7	3,796.7	3,796.7	8.8	6.6	96.21	-314.0	442.7	466.5	451.1	15.43	30.231	
3,900.0	3,883.2	3,896.2	3,896.2	9.1	6.8	97.42	-314.0	442.7	467.7	451.9	15.84	29.524	
4,000.0	3,982.7	3,995.7	3,995.7	9.3	7.0	98.63	-314.0	442.7	469.1	452.9	16.25	28.870	
4,100.0	4,082.2	4,095.2	4,095.2	9.6	7.1	99.84	-314.0	442.7	470.8	454.1	16.65	28.265	
4,200.0	4,181.7	4,194.7	4,194.7	9.8	7.3	101.03	-314.0	442.7	472.6	455.5	17.06	27.705	
4,300.0	4,281.2	4,294.2	4,294.2	10.1	7.5	102.21	-314.0	442.7	474.6	457.2	17.46	27.187	
4,400.0	4,380.7	4,393.7	4,393.7	10.3	7.7	103.39	-314.0	442.7	476.9	459.0	17.85	26.708	
4,500.0	4,480.2	4,493.2	4,493.2	10.6	7.8	104.55	-314.0	442.7	479.3	461.0	18.25	26.264	
4,600.0	4,579.7	4,592.7	4,592.7	10.8	8.0	105.70	-314.0	442.7	481.9	463.3	18.64	25.853	
4,700.0	4,679.2	4,692.2	4,692.2	11.1	8.2	106.84	-314.0	442.7	484.7	465.7	19.03	25.474	
4,800.0	4,778.7	4,791.7	4,791.7	11.3	8.3	107.96	-314.0	442.7	487.8	468.3	19.42	25.123	
4,900.0	4,878.2	4,891.2	4,891.2	11.6	8.5	109.07	-314.0	442.7	491.0	471.2	19.80	24.798	
5,000.0	4,977.7	4,990.7	4,990.7	11.8	8.7	110.16	-314.0	442.7	494.3	474.2	20.18	24.499	
5,100.0	5,077.2	5,090.2	5,090.2	12.1	8.9	111.24	-314.0	442.7	497.9	477.4	20.56	24.222	
7,200.0	7,135.1	7,148.1	7,148.1	16.7	12.5	35.12	-314.0	442.7	463.6	439.6	24.01	19.307	
7,300.0	7,205.2	7,218.2	7,218.2	16.8	12.6	43.22	-314.0	442.7	401.7	378.3	23.38	17.178	
7,400.0	7,262.1	7,275.1	7,275.1	17.0	12.7	56.37	-314.0	442.7	333.3	309.3	23.97	13.903	
7,500.0	7,304.0	7,317.0	7,317.0	17.3	12.8	72.59	-314.0	442.7	265.5	240.0	25.51	10.410	
7,600.0	7,329.5	7,342.5	7,342.5	17.8	12.8	85.57	-314.0	442.7	211.3	184.7	26.67	7.923	
7,690.4	7,338.0	7,351.0	7,351.0	18.4	12.8	90.00	-314.0	442.7	191.9	164.5	27.41	7.000	CC, ES
7,700.0	7,338.0	7,351.0	7,351.0	18.4	12.8	90.00	-314.0	442.7	192.1	164.6	27.48	6.991	SF
7,800.0	7,338.0	7,351.0	7,351.0	19.2	12.8	90.00	-314.0	442.7	220.8	192.4	28.44	7.766	
7,900.0	7,338.0	7,351.0	7,351.0	20.1	12.8	90.00	-314.0	442.7	283.9	254.4	29.52	9.619	
8,000.0	7,338.0	7,351.0	7,351.0	21.1	12.8	90.00	-314.0	442.7	364.0	333.3	30.71	11.853	
8,100.0	7,338.0	7,351.0	7,351.0	22.2	12.8	90.00	-314.0	442.7	452.0	420.1	31.98	14.133	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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
7,700.0	7,338.0	7,430.0	7,430.0	18.4	13.0	90.00	-688.4	310.2	488.5	460.8	27.62	17.684	
7,800.0	7,338.0	7,430.0	7,430.0	19.2	13.0	90.00	-688.4	310.2	419.0	390.4	28.57	14.663	
7,900.0	7,338.0	7,430.0	7,430.0	20.1	13.0	90.00	-688.4	310.2	364.0	334.4	29.66	12.274	
8,000.0	7,338.0	7,430.0	7,430.0	21.1	13.0	90.00	-688.4	310.2	330.9	300.0	30.85	10.726	
8,065.2	7,338.0	7,430.0	7,430.0	21.8	13.0	90.00	-688.4	310.2	324.4	292.7	31.68	10.239	CC, ES
8,100.0	7,338.0	7,430.0	7,430.0	22.2	13.0	90.00	-688.4	310.2	326.2	294.1	32.12	10.156	SF
8,200.0	7,338.0	7,430.0	7,430.0	23.4	13.0	90.00	-688.4	310.2	351.3	317.8	33.47	10.495	
8,300.0	7,338.0	7,430.0	7,430.0	24.6	13.0	90.00	-688.4	310.2	400.4	365.6	34.87	11.482	
8,400.0	7,338.0	7,430.0	7,430.0	25.9	13.0	90.00	-688.4	310.2	466.2	429.8	36.33	12.833	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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
7,700.0	7,338.0	7,329.0	7,329.0	18.4	12.8	90.00	-703.7	316.4	496.0	468.6	27.45	18.073	
7,800.0	7,338.0	7,329.0	7,329.0	19.2	12.8	90.00	-703.7	316.4	424.2	395.8	28.40	14.937	
7,900.0	7,338.0	7,329.0	7,329.0	20.1	12.8	90.00	-703.7	316.4	365.8	336.4	29.48	12.409	
8,000.0	7,338.0	7,329.0	7,329.0	21.1	12.8	90.00	-703.7	316.4	328.2	297.6	30.67	10.702	
8,080.5	7,338.0	7,329.0	7,329.0	22.0	12.8	90.00	-703.7	316.4	318.2	286.5	31.70	10.039	CC, ES
8,100.0	7,338.0	7,329.0	7,329.0	22.2	12.8	90.00	-703.7	316.4	318.8	286.9	31.95	9.979	SF
8,200.0	7,338.0	7,329.0	7,329.0	23.4	12.8	90.00	-703.7	316.4	339.9	306.6	33.29	10.209	
8,300.0	7,338.0	7,329.0	7,329.0	24.6	12.8	90.00	-703.7	316.4	386.6	351.9	34.70	11.141	
8,400.0	7,338.0	7,329.0	7,329.0	25.9	12.8	90.00	-703.7	316.4	450.9	414.8	36.15	12.474	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 718-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	7,205.2	7,255.8	7,203.8	16.8	18.1	-56.75	-282.1	993.7	495.1	467.3	27.75	17.841	
7,400.0	7,262.1	7,313.9	7,261.9	17.0	18.2	-69.80	-282.0	993.5	440.7	413.2	27.43	16.065	
7,500.0	7,304.0	7,356.6	7,304.6	17.3	18.2	-81.38	-281.9	993.3	393.6	365.8	27.81	14.153	
7,600.0	7,329.5	7,382.0	7,330.0	17.8	18.3	-88.64	-281.9	993.2	364.1	335.7	28.40	12.817	
7,661.0	7,336.8	7,389.1	7,337.1	18.2	18.3	-90.36	-281.9	993.1	358.7	329.8	28.88	12.421	CC, ES
7,700.0	7,338.0	7,390.2	7,338.2	18.4	18.3	-90.35	-281.8	993.1	360.9	331.7	29.20	12.362	SF
7,800.0	7,338.0	7,390.0	7,337.9	19.2	18.3	-90.30	-281.8	993.1	385.4	355.3	30.15	12.784	
7,900.0	7,338.0	7,389.7	7,337.6	20.1	18.3	-90.26	-281.8	993.1	432.2	401.0	31.23	13.839	
8,000.0	7,338.0	7,389.4	7,337.4	21.1	18.3	-90.22	-281.8	993.1	495.1	462.7	32.42	15.269	

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 2D-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 2D-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	27.97	236.8	125.8	269.4				
100.0	100.0	74.0	74.0	0.1	0.1	27.97	236.8	125.8	268.2	267.9	0.25	1,066.113	
200.0	200.0	174.0	174.0	0.3	0.3	27.97	236.8	125.8	268.2	267.6	0.60	446.486	
300.0	300.0	274.0	274.0	0.5	0.5	-38.79	236.8	125.8	267.5	266.5	0.95	281.558	
400.0	400.0	374.0	374.0	0.7	0.7	-39.16	236.8	125.8	265.4	264.1	1.30	204.031	
500.0	499.9	473.9	473.9	0.8	0.8	-39.78	236.8	125.8	262.1	260.4	1.66	158.333	
600.0	599.7	573.7	573.7	1.0	1.0	-40.68	236.8	125.8	257.4	255.4	2.01	127.769	
700.0	699.4	673.4	673.4	1.3	1.2	-41.88	236.8	125.8	251.5	249.1	2.38	105.595	
800.0	798.9	772.9	772.9	1.5	1.3	-43.41	236.8	125.8	244.5	241.7	2.76	88.620	
900.0	898.4	872.4	872.4	1.7	1.5	-45.07	236.8	125.8	237.3	234.1	3.14	75.496	
1,000.0	997.9	971.9	971.9	2.0	1.7	-46.84	236.8	125.8	230.3	226.7	3.53	65.181	
1,100.0	1,097.4	1,071.4	1,071.4	2.2	1.9	-48.71	236.8	125.8	223.5	219.6	3.93	56.891	
1,200.0	1,196.9	1,170.9	1,170.9	2.4	2.0	-50.69	236.8	125.8	217.0	212.6	4.33	50.109	
1,300.0	1,296.4	1,270.4	1,270.4	2.7	2.2	-52.80	236.8	125.8	210.7	206.0	4.74	44.481	
1,400.0	1,395.9	1,369.9	1,369.9	2.9	2.4	-55.03	236.8	125.8	204.8	199.7	5.15	39.758	
1,500.0	1,495.4	1,469.4	1,469.4	3.2	2.6	-57.39	236.8	125.8	199.2	193.6	5.57	35.758	
1,600.0	1,594.9	1,568.9	1,568.9	3.4	2.7	-59.88	236.8	125.8	194.0	188.0	6.00	32.348	
1,700.0	1,694.4	1,668.4	1,668.4	3.7	2.9	-62.50	236.8	125.8	189.1	182.7	6.43	29.426	
1,800.0	1,793.9	1,767.9	1,767.9	3.9	3.1	-65.25	236.8	125.8	184.7	177.8	6.86	26.913	
1,900.0	1,893.3	1,867.3	1,867.3	4.2	3.3	-68.14	236.8	125.8	180.7	173.4	7.30	24.749	
2,000.0	1,992.8	1,966.8	1,966.8	4.4	3.4	-71.14	236.8	125.8	177.2	169.4	7.74	22.885	
2,100.0	2,092.3	2,066.3	2,066.3	4.6	3.6	-74.25	236.8	125.8	174.2	166.0	8.18	21.281	
2,200.0	2,191.8	2,165.8	2,165.8	4.9	3.8	-77.46	236.8	125.8	171.7	163.1	8.63	19.904	
2,300.0	2,291.3	2,265.3	2,265.3	5.1	4.0	-80.75	236.8	125.8	169.8	160.7	9.07	18.728	
2,400.0	2,390.8	2,364.8	2,364.8	5.4	4.1	-84.11	236.8	125.8	168.4	158.9	9.50	17.729	
2,500.0	2,490.3	2,464.3	2,464.3	5.6	4.3	-87.51	236.8	125.8	167.7	157.8	9.93	16.887	
2,573.0	2,563.0	2,537.0	2,537.0	5.8	4.4	-90.00	236.8	125.8	167.6	157.3	10.24	16.361 CC	
2,600.0	2,589.8	2,563.8	2,563.8	5.9	4.5	-90.92	236.8	125.8	167.6	157.2	10.35	16.185 ES	
2,700.0	2,689.3	2,663.3	2,663.3	6.1	4.6	-94.33	236.8	125.8	168.0	157.3	10.77	15.606	
2,800.0	2,788.8	2,762.8	2,762.8	6.4	4.8	-97.71	236.8	125.8	169.1	157.9	11.17	15.137	
2,900.0	2,888.3	2,862.3	2,862.3	6.6	5.0	-101.03	236.8	125.8	170.7	159.2	11.56	14.765	
3,000.0	2,987.8	2,961.8	2,961.8	6.9	5.2	-104.28	236.8	125.8	172.9	161.0	11.95	14.478	
3,100.0	3,087.3	3,061.3	3,061.3	7.1	5.3	-107.44	236.8	125.8	175.7	163.4	12.32	14.266	
3,200.0	3,186.8	3,160.8	3,160.8	7.4	5.5	-110.50	236.8	125.8	179.0	166.3	12.68	14.118	
3,300.0	3,286.3	3,260.3	3,260.3	7.6	5.7	-113.43	236.8	125.8	182.8	169.7	13.03	14.027	
3,400.0	3,385.8	3,359.8	3,359.8	7.9	5.9	-116.25	236.8	125.8	187.0	173.6	13.37	13.984	
3,500.0	3,485.3	3,459.3	3,459.3	8.1	6.0	-118.93	236.8	125.8	191.7	178.0	13.71	13.982 SF	
3,600.0	3,584.8	3,558.8	3,558.8	8.4	6.2	-121.48	236.8	125.8	196.7	182.7	14.04	14.016	
3,700.0	3,684.3	3,658.3	3,658.3	8.6	6.4	-123.90	236.8	125.8	202.2	187.8	14.36	14.079	
3,800.0	3,783.7	3,757.7	3,757.7	8.8	6.6	-126.19	236.8	125.8	208.0	193.3	14.68	14.166	
3,900.0	3,883.2	3,857.2	3,857.2	9.1	6.7	-128.35	236.8	125.8	214.1	199.1	15.00	14.274	
4,000.0	3,982.7	3,956.7	3,956.7	9.3	6.9	-130.39	236.8	125.8	220.5	205.1	15.31	14.399	
4,100.0	4,082.2	4,056.2	4,056.2	9.6	7.1	-132.32	236.8	125.8	227.1	211.5	15.62	14.537	
4,200.0	4,181.7	4,155.7	4,155.7	9.8	7.3	-134.13	236.8	125.8	234.0	218.1	15.93	14.686	
4,300.0	4,281.2	4,255.2	4,255.2	10.1	7.4	-135.84	236.8	125.8	241.1	224.9	16.25	14.843	
4,400.0	4,380.7	4,354.7	4,354.7	10.3	7.6	-137.45	236.8	125.8	248.4	231.9	16.56	15.007	
4,500.0	4,480.2	4,454.2	4,454.2	10.6	7.8	-138.96	236.8	125.8	255.9	239.1	16.87	15.175	
4,600.0	4,579.7	4,553.7	4,553.7	10.8	7.9	-140.39	236.8	125.8	263.6	246.4	17.18	15.347	
4,700.0	4,679.2	4,653.2	4,653.2	11.1	8.1	-141.74	236.8	125.8	271.4	254.0	17.49	15.521	
4,800.0	4,778.7	4,752.7	4,752.7	11.3	8.3	-143.02	236.8	125.8	279.4	261.6	17.80	15.697	
4,900.0	4,878.2	4,852.2	4,852.2	11.6	8.5	-144.22	236.8	125.8	287.5	269.4	18.11	15.872	
5,000.0	4,977.7	4,951.7	4,951.7	11.8	8.6	-145.35	236.8	125.8	295.7	277.3	18.43	16.047	

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 2D-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 2D-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	5,077.2	5,051.2	5,051.2	12.1	8.8	-146.43	236.8	125.8	304.1	285.3	18.74	16.222	
5,200.0	5,176.7	5,150.7	5,150.7	12.3	9.0	-147.44	236.8	125.8	312.5	293.4	19.06	16.394	
5,300.0	5,276.2	5,250.2	5,250.2	12.6	9.2	-148.41	236.8	125.8	321.0	301.6	19.38	16.565	
5,400.0	5,375.7	5,349.7	5,349.7	12.8	9.3	-149.32	236.8	125.8	329.6	309.9	19.70	16.734	
5,500.0	5,475.2	5,449.2	5,449.2	13.1	9.5	-150.19	236.8	125.8	338.3	318.3	20.02	16.901	
5,600.0	5,574.7	5,548.7	5,548.7	13.3	9.7	-151.01	236.8	125.8	347.1	326.7	20.34	17.065	
5,700.0	5,674.1	5,648.1	5,648.1	13.6	9.9	-151.79	236.8	125.8	355.9	335.2	20.66	17.226	
5,800.0	5,773.6	5,747.6	5,747.6	13.8	10.0	-152.54	236.8	125.8	364.8	343.8	20.98	17.385	
5,900.0	5,873.1	5,847.1	5,847.1	14.0	10.2	-153.25	236.8	125.8	373.7	352.4	21.31	17.540	
6,000.0	5,972.6	5,946.6	5,946.6	14.3	10.4	-153.92	236.8	125.8	382.7	361.1	21.63	17.693	
6,100.0	6,072.1	6,046.1	6,046.1	14.5	10.6	-154.57	236.8	125.8	391.8	369.8	21.96	17.843	
6,200.0	6,171.6	6,145.6	6,145.6	14.8	10.7	-155.18	236.8	125.8	400.9	378.6	22.28	17.990	
6,300.0	6,271.1	6,245.1	6,245.1	15.0	10.9	-155.77	236.8	125.8	410.0	387.4	22.61	18.133	
6,400.0	6,370.6	6,344.6	6,344.6	15.3	11.1	-156.33	236.8	125.8	419.2	396.3	22.94	18.274	
6,500.0	6,470.1	6,444.1	6,444.1	15.5	11.2	-156.87	236.8	125.8	428.4	405.2	23.27	18.412	
6,600.0	6,569.6	6,543.6	6,543.6	15.8	11.4	-157.39	236.8	125.8	437.7	414.1	23.60	18.547	
6,700.0	6,669.1	6,643.1	6,643.1	16.0	11.6	-157.88	236.8	125.8	447.0	423.0	23.93	18.679	
6,800.0	6,768.6	6,742.6	6,742.6	16.3	11.8	177.02	236.8	125.8	456.3	432.0	24.25	18.819	
6,900.0	6,867.7	6,841.7	6,841.7	16.4	11.9	116.27	236.8	125.8	465.3	440.7	24.53	18.969	
7,000.0	6,963.7	6,937.7	6,937.7	16.5	12.1	105.64	236.8	125.8	474.6	449.8	24.81	19.131	
7,100.0	7,053.7	7,027.7	7,027.7	16.6	12.3	104.33	236.8	125.8	486.6	461.6	25.02	19.452	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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
12,100.0	7,338.0	7,372.0	7,372.0	86.2	12.8	90.00	-5,057.3	324.5	455.8	357.4	98.32	4.635	
12,200.0	7,338.0	7,372.0	7,372.0	87.9	12.8	90.00	-5,057.3	324.5	388.5	288.4	100.06	3.882	
12,300.0	7,338.0	7,372.0	7,372.0	89.6	12.8	90.00	-5,057.3	324.5	337.8	236.0	101.79	3.318	
12,400.0	7,338.0	7,372.0	7,372.0	91.4	12.8	90.00	-5,057.3	324.5	311.9	208.4	103.53	3.013	
12,434.0	7,338.0	7,372.0	7,372.0	92.0	12.8	90.00	-5,057.3	324.5	310.1	205.9	104.12	2.978	CC, ES, SF
12,500.0	7,338.0	7,372.0	7,372.0	93.1	12.8	90.00	-5,057.3	324.5	317.0	211.7	105.27	3.011	
12,600.0	7,338.0	7,372.0	7,372.0	94.8	12.8	90.00	-5,057.3	324.5	351.7	244.7	107.00	3.287	
12,700.0	7,338.0	7,372.0	7,372.0	96.5	12.8	90.00	-5,057.3	324.5	408.5	299.8	108.74	3.757	
12,800.0	7,338.0	7,372.0	7,372.0	98.3	12.8	90.00	-5,057.3	324.5	479.7	369.2	110.48	4.341	

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 2D-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 2D-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	-50.3	50.3				
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	-50.3	50.3	50.1	0.24	205.869	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-50.3	50.3	49.7	0.59	84.770	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-156.98	0.0	-50.3	51.1	50.2	0.94	54.220	
400.0	400.0	400.0	400.0	0.7	0.6	-158.06	0.0	-50.3	53.5	52.2	1.29	41.427	
500.0	499.9	499.1	499.1	0.8	0.8	-161.24	-1.6	-50.8	58.2	56.6	1.64	35.448	
600.0	599.7	598.6	598.4	1.0	1.0	-166.23	-5.5	-52.0	65.8	63.8	1.99	32.966	
700.0	699.4	697.9	697.8	1.3	1.2	-170.44	-9.4	-53.2	75.4	73.1	2.35	32.152	SF
800.0	798.9	797.1	796.9	1.5	1.4	-173.81	-13.4	-54.4	87.1	84.4	2.70	32.300	
900.0	898.4	896.3	895.9	1.7	1.6	-176.41	-17.3	-55.6	99.5	96.5	3.05	32.640	
1,000.0	997.9	995.4	995.0	2.0	1.7	-178.43	-21.2	-56.8	112.1	108.7	3.40	32.954	
1,100.0	1,097.4	1,094.6	1,094.0	2.2	1.9	179.96	-25.2	-58.0	124.8	121.0	3.75	33.236	
1,200.0	1,196.9	1,193.7	1,193.1	2.4	2.1	178.65	-29.1	-59.2	137.5	133.4	4.11	33.486	
1,300.0	1,296.4	1,292.8	1,292.1	2.7	2.3	177.56	-33.0	-60.5	150.3	145.9	4.46	33.708	
1,400.0	1,395.9	1,392.0	1,391.2	2.9	2.5	176.64	-37.0	-61.7	163.2	158.4	4.81	33.904	
1,500.0	1,495.4	1,491.1	1,490.2	3.2	2.7	175.86	-40.9	-62.9	176.1	170.9	5.17	34.078	
1,600.0	1,594.9	1,590.3	1,589.3	3.4	2.9	175.18	-44.8	-64.1	189.0	183.5	5.52	34.233	
1,700.0	1,694.4	1,689.4	1,688.3	3.7	3.0	174.59	-48.8	-65.3	202.0	196.1	5.88	34.372	
1,800.0	1,793.9	1,788.5	1,787.4	3.9	3.2	174.07	-52.7	-66.5	214.9	208.7	6.23	34.497	
1,900.0	1,893.3	1,887.7	1,886.5	4.2	3.4	173.61	-56.6	-67.7	227.9	221.3	6.58	34.609	
2,000.0	1,992.8	1,986.8	1,985.5	4.4	3.6	173.20	-60.6	-68.9	240.9	233.9	6.94	34.711	
2,100.0	2,092.3	2,085.9	2,084.6	4.6	3.8	172.83	-64.5	-70.1	253.9	246.6	7.29	34.804	
2,200.0	2,191.8	2,185.1	2,183.6	4.9	4.0	172.50	-68.4	-71.3	266.9	259.2	7.65	34.889	
2,300.0	2,291.3	2,284.2	2,282.7	5.1	4.2	172.20	-72.4	-72.5	279.9	271.9	8.01	34.967	
2,400.0	2,390.8	2,383.4	2,381.7	5.4	4.3	171.92	-76.3	-73.7	292.9	284.6	8.36	35.039	
2,500.0	2,490.3	2,482.5	2,480.8	5.6	4.5	171.67	-80.2	-74.9	306.0	297.3	8.72	35.105	
2,600.0	2,589.8	2,581.6	2,579.8	5.9	4.7	171.44	-84.2	-76.2	319.0	309.9	9.07	35.166	
2,700.0	2,689.3	2,680.8	2,678.9	6.1	4.9	171.23	-88.1	-77.4	332.1	322.6	9.43	35.223	
2,800.0	2,788.8	2,779.9	2,777.9	6.4	5.1	171.03	-92.0	-78.6	345.1	335.3	9.78	35.276	
2,900.0	2,888.3	2,879.1	2,877.0	6.6	5.3	170.85	-96.0	-79.8	358.2	348.0	10.14	35.325	
3,000.0	2,987.8	2,978.2	2,976.0	6.9	5.5	170.68	-99.9	-81.0	371.2	360.7	10.49	35.371	
3,100.0	3,087.3	3,077.3	3,075.1	7.1	5.7	170.52	-103.8	-82.2	384.3	373.4	10.85	35.414	
3,200.0	3,186.8	3,176.5	3,174.1	7.4	5.8	170.37	-107.8	-83.4	397.3	386.1	11.21	35.454	
3,300.0	3,286.3	3,275.6	3,273.2	7.6	6.0	170.24	-111.7	-84.6	410.4	398.8	11.56	35.492	
3,400.0	3,385.8	3,374.7	3,372.3	7.9	6.2	170.11	-115.6	-85.8	423.4	411.5	11.92	35.528	
3,500.0	3,485.3	3,473.9	3,471.3	8.1	6.4	169.98	-119.6	-87.0	436.5	424.2	12.27	35.562	
3,600.0	3,584.8	3,573.0	3,570.4	8.4	6.6	169.87	-123.5	-88.2	449.6	436.9	12.63	35.593	
3,700.0	3,684.3	3,672.2	3,669.4	8.6	6.8	169.76	-127.4	-89.4	462.6	449.7	12.99	35.624	
3,800.0	3,783.7	3,771.3	3,768.5	8.8	7.0	169.66	-131.4	-90.6	475.7	462.4	13.34	35.652	
3,900.0	3,883.2	3,870.4	3,867.5	9.1	7.2	169.56	-135.3	-91.9	488.8	475.1	13.70	35.679	

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 2D-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 2D-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	-89.95	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	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-157.22	0.0	-30.7	31.5	30.6	0.94	33.466	
400.0	400.0	400.0	400.0	0.7	0.6	-158.92	0.0	-30.7	34.0	32.7	1.29	26.295	
500.0	499.9	499.9	499.9	0.8	0.8	-161.27	0.0	-30.7	38.1	36.4	1.64	23.195	
600.0	599.7	599.7	599.7	1.0	1.0	-163.81	0.0	-30.7	43.9	41.9	1.99	22.054	
700.0	699.4	700.0	700.0	1.3	1.2	-166.89	-0.4	-30.0	50.8	48.5	2.34	21.724	
800.0	798.9	800.4	800.3	1.5	1.3	-170.73	-1.8	-27.7	58.3	55.6	2.69	21.681	
900.0	898.4	900.8	900.6	1.7	1.5	-174.90	-4.0	-24.0	65.3	62.3	3.04	21.474	
1,000.0	997.9	1,001.2	1,000.9	2.0	1.7	-179.36	-7.2	-18.7	71.5	68.1	3.40	21.037	
1,100.0	1,097.4	1,101.5	1,100.8	2.2	1.9	175.82	-11.3	-12.0	77.2	73.4	3.77	20.459	
1,200.0	1,196.9	1,201.1	1,200.1	2.4	2.1	171.32	-15.7	-4.7	83.0	78.9	4.16	19.964	
1,300.0	1,296.4	1,300.7	1,299.4	2.7	2.3	167.43	-20.0	2.5	89.3	84.8	4.56	19.598	
1,400.0	1,395.9	1,400.4	1,398.6	2.9	2.6	164.06	-24.4	9.8	96.0	91.0	4.97	19.322	
1,500.0	1,495.4	1,500.0	1,497.9	3.2	2.8	161.13	-28.8	17.1	102.9	97.5	5.38	19.112	
1,600.0	1,594.9	1,599.6	1,597.2	3.4	3.0	158.58	-33.2	24.3	110.1	104.3	5.81	18.951	
1,700.0	1,694.4	1,699.2	1,696.4	3.7	3.2	156.34	-37.5	31.6	117.4	111.2	6.24	18.827	
1,800.0	1,793.9	1,798.9	1,795.7	3.9	3.4	154.37	-41.9	38.8	124.9	118.3	6.67	18.730	
1,900.0	1,893.3	1,898.5	1,895.0	4.2	3.7	152.62	-46.3	46.1	132.6	125.5	7.11	18.656	
2,000.0	1,992.8	1,998.1	1,994.2	4.4	3.9	151.07	-50.7	53.4	140.3	132.8	7.55	18.598	
2,100.0	2,092.3	2,097.8	2,093.5	4.6	4.1	149.68	-55.1	60.6	148.2	140.2	7.99	18.554	
2,200.0	2,191.8	2,197.4	2,192.8	4.9	4.3	148.43	-59.4	67.9	156.1	147.7	8.43	18.521	
2,300.0	2,291.3	2,297.0	2,292.1	5.1	4.5	147.30	-63.8	75.1	164.1	155.2	8.87	18.495	
2,400.0	2,390.8	2,396.7	2,391.3	5.4	4.8	146.27	-68.2	82.4	172.1	162.8	9.32	18.477	
2,500.0	2,490.3	2,496.3	2,490.6	5.6	5.0	145.34	-72.6	89.7	180.2	170.5	9.76	18.464	
2,600.0	2,589.8	2,595.9	2,589.9	5.9	5.2	144.49	-76.9	96.9	188.4	178.2	10.21	18.455	
2,700.0	2,689.3	2,695.6	2,689.1	6.1	5.4	143.71	-81.3	104.2	196.6	185.9	10.65	18.449	
2,800.0	2,788.8	2,795.2	2,788.4	6.4	5.7	142.99	-85.7	111.4	204.8	193.7	11.10	18.446	
2,900.0	2,888.3	2,894.8	2,887.7	6.6	5.9	142.32	-90.1	118.7	213.0	201.5	11.55	18.446	
3,000.0	2,987.8	2,994.4	2,986.9	6.9	6.1	141.71	-94.4	126.0	221.3	209.3	12.00	18.447	
3,100.0	3,087.3	3,094.1	3,086.2	7.1	6.3	141.14	-98.8	133.2	229.6	217.1	12.44	18.450	
3,200.0	3,186.8	3,193.7	3,185.5	7.4	6.6	140.61	-103.2	140.5	237.9	225.0	12.89	18.454	
3,300.0	3,286.3	3,293.3	3,284.7	7.6	6.8	140.11	-107.6	147.7	246.2	232.9	13.34	18.459	
3,400.0	3,385.8	3,393.0	3,384.0	7.9	7.0	139.65	-111.9	155.0	254.6	240.8	13.79	18.464	
3,500.0	3,485.3	3,492.6	3,483.3	8.1	7.3	139.22	-116.3	162.3	262.9	248.7	14.23	18.471	
3,600.0	3,584.8	3,592.2	3,582.6	8.4	7.5	138.81	-120.7	169.5	271.3	256.6	14.68	18.477	
3,700.0	3,684.3	3,691.9	3,681.8	8.6	7.7	138.43	-125.1	176.8	279.7	264.6	15.13	18.484	
3,800.0	3,783.7	3,791.5	3,781.1	8.8	7.9	138.07	-129.4	184.0	288.1	272.5	15.58	18.492	
3,900.0	3,883.2	3,891.1	3,880.4	9.1	8.2	137.73	-133.8	191.3	296.5	280.5	16.03	18.499	
4,000.0	3,982.7	3,990.7	3,979.6	9.3	8.4	137.41	-138.2	198.6	304.9	288.5	16.48	18.507	
4,100.0	4,082.2	4,090.4	4,078.9	9.6	8.6	137.11	-142.6	205.8	313.4	296.4	16.93	18.514	
4,200.0	4,181.7	4,190.0	4,178.2	9.8	8.8	136.82	-146.9	213.1	321.8	304.4	17.37	18.522	
4,300.0	4,281.2	4,289.6	4,277.4	10.1	9.1	136.55	-151.3	220.4	330.2	312.4	17.82	18.530	
4,400.0	4,380.7	4,389.3	4,376.7	10.3	9.3	136.29	-155.7	227.6	338.7	320.4	18.27	18.538	
4,500.0	4,480.2	4,488.9	4,476.0	10.6	9.5	136.05	-160.1	234.9	347.2	328.4	18.72	18.546	
4,600.0	4,579.7	4,588.5	4,575.2	10.8	9.8	135.81	-164.5	242.1	355.6	336.5	19.17	18.553	
4,700.0	4,679.2	4,688.2	4,674.5	11.1	10.0	135.59	-168.8	249.4	364.1	344.5	19.62	18.561	
4,800.0	4,778.7	4,787.8	4,773.8	11.3	10.2	135.37	-173.2	256.7	372.6	352.5	20.07	18.568	
4,900.0	4,878.2	4,887.4	4,873.1	11.6	10.4	135.17	-177.6	263.9	381.1	360.5	20.51	18.576	
5,000.0	4,977.7	4,987.1	4,972.3	11.8	10.7	134.98	-182.0	271.2	389.5	368.6	20.96	18.583	
5,100.0	5,077.2	5,086.7	5,071.6	12.1	10.9	134.79	-186.3	278.4	398.0	376.6	21.41	18.590	

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 2D-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 2D-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	5,176.7	5,186.3	5,170.9	12.3	11.1	134.61	-190.7	285.7	406.5	384.7	21.86	18.598	
5,300.0	5,276.2	5,285.9	5,270.1	12.6	11.4	134.44	-195.1	293.0	415.0	392.7	22.31	18.605	
5,400.0	5,375.7	5,385.6	5,369.4	12.8	11.6	134.27	-199.5	300.2	423.5	400.8	22.76	18.611	
5,500.0	5,475.2	5,485.2	5,468.7	13.1	11.8	134.12	-203.8	307.5	432.0	408.8	23.21	18.618	
5,600.0	5,574.7	5,584.8	5,567.9	13.3	12.0	133.96	-208.2	314.7	440.5	416.9	23.65	18.625	
5,700.0	5,674.1	5,684.5	5,667.2	13.6	12.3	133.82	-212.6	322.0	449.1	425.0	24.10	18.631	
5,800.0	5,773.6	5,784.1	5,766.5	13.8	12.5	133.68	-217.0	329.3	457.6	433.0	24.55	18.638	
5,900.0	5,873.1	5,883.7	5,865.8	14.0	12.7	133.54	-221.3	336.5	466.1	441.1	25.00	18.644	
6,000.0	5,972.6	5,983.4	5,965.0	14.3	12.9	133.41	-225.7	343.8	474.6	449.2	25.45	18.650	
6,100.0	6,072.1	6,083.0	6,064.3	14.5	13.2	133.28	-230.1	351.0	483.1	457.2	25.90	18.656	
6,200.0	6,171.6	6,182.6	6,163.6	14.8	13.4	133.16	-234.5	358.3	491.7	465.3	26.35	18.662	
6,700.0	6,669.1	7,187.5	7,037.6	16.0	14.9	158.40	77.3	421.0	433.3	407.7	25.59	16.933	
6,800.0	6,768.6	7,285.3	7,071.8	16.3	15.3	155.12	168.8	423.2	351.9	327.4	24.51	14.359	
6,900.0	6,867.7	7,313.6	7,078.7	16.4	15.5	114.49	196.2	423.6	273.3	247.6	25.68	10.643	
7,000.0	6,963.7	7,308.7	7,077.6	16.5	15.5	108.29	191.4	423.5	211.4	185.2	26.23	8.060	
7,100.0	7,053.7	7,288.1	7,072.5	16.6	15.3	100.16	171.4	423.2	186.0	160.2	25.77	7.218	SF
7,102.7	7,056.0	7,287.4	7,072.3	16.6	15.3	99.87	170.7	423.2	186.0	160.2	25.75	7.222	
7,200.0	7,135.1	7,258.9	7,064.1	16.7	15.2	87.19	143.5	422.7	207.5	182.4	25.17	8.245	
7,300.0	7,205.2	7,224.5	7,052.4	16.8	15.0	71.31	111.2	422.0	260.5	235.8	24.69	10.552	
7,400.0	7,262.1	7,186.9	7,037.3	17.0	14.9	56.30	76.7	421.0	325.7	302.0	23.66	13.767	
7,500.0	7,304.0	7,150.0	7,020.4	17.3	14.8	44.90	43.9	419.9	393.0	371.1	21.92	17.933	
7,600.0	7,329.5	7,100.0	6,994.2	17.8	14.7	36.06	1.4	418.1	457.9	438.0	19.86	23.059	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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	-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	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-158.25	0.0	-11.2	12.0	11.0	0.94	12.715	
400.0	400.0	400.2	400.2	0.7	0.6	-163.61	-0.3	-10.3	13.7	12.4	1.29	10.569	
500.0	499.9	500.4	500.3	0.8	0.8	-172.32	-1.1	-7.9	15.7	14.0	1.64	9.535	
600.0	599.7	600.5	600.4	1.0	1.0	177.37	-2.5	-3.7	18.4	16.4	2.00	9.216	
700.0	699.4	700.6	700.3	1.3	1.2	167.14	-4.5	2.1	22.3	19.9	2.37	9.401	
800.0	798.9	800.6	800.0	1.5	1.4	158.06	-7.0	9.5	27.4	24.6	2.77	9.898	
900.0	898.4	900.5	899.4	1.7	1.6	149.51	-10.1	18.6	32.9	29.7	3.21	10.248	
1,000.0	997.9	1,000.4	998.6	2.0	1.9	140.97	-13.7	29.3	38.5	34.9	3.69	10.442	
1,100.0	1,097.4	1,100.0	1,097.5	2.2	2.2	133.03	-17.8	41.2	44.8	40.6	4.20	10.661	
1,200.0	1,196.9	1,199.7	1,196.3	2.4	2.4	127.02	-21.9	53.3	51.7	47.0	4.72	10.965	
1,300.0	1,296.4	1,299.3	1,295.1	2.7	2.7	122.47	-26.0	65.3	59.1	53.9	5.23	11.297	
1,400.0	1,395.9	1,398.9	1,394.0	2.9	3.0	118.93	-30.0	77.3	66.7	61.0	5.74	11.626	
1,500.0	1,495.4	1,498.6	1,492.8	3.2	3.2	116.14	-34.1	89.3	74.6	68.3	6.25	11.938	
1,600.0	1,594.9	1,598.2	1,591.6	3.4	3.5	113.87	-38.2	101.3	82.6	75.8	6.75	12.230	
1,700.0	1,694.4	1,697.8	1,690.4	3.7	3.8	112.01	-42.3	113.3	90.6	83.4	7.25	12.498	
1,800.0	1,793.9	1,797.5	1,789.2	3.9	4.1	110.46	-46.4	125.3	98.8	91.1	7.75	12.745	
1,900.0	1,893.3	1,897.1	1,888.1	4.2	4.3	109.14	-50.4	137.4	107.0	98.8	8.25	12.970	
2,000.0	1,992.8	1,996.7	1,986.9	4.4	4.6	108.01	-54.5	149.4	115.3	106.6	8.75	13.177	
2,100.0	2,092.3	2,096.4	2,085.7	4.6	4.9	107.04	-58.6	161.4	123.6	114.4	9.25	13.367	
2,200.0	2,191.8	2,196.0	2,184.5	4.9	5.2	106.18	-62.7	173.4	132.0	122.2	9.75	13.541	
2,300.0	2,291.3	2,295.6	2,283.4	5.1	5.5	105.43	-66.8	185.4	140.4	130.1	10.24	13.702	
2,400.0	2,390.8	2,395.3	2,382.2	5.4	5.7	104.76	-70.9	197.4	148.8	138.0	10.74	13.850	
2,500.0	2,490.3	2,494.9	2,481.0	5.6	6.0	104.17	-74.9	209.5	157.2	145.9	11.24	13.987	
2,600.0	2,589.8	2,594.5	2,579.8	5.9	6.3	103.63	-79.0	221.5	165.6	153.9	11.73	14.114	
2,700.0	2,689.3	2,694.2	2,678.6	6.1	6.6	103.15	-83.1	233.5	174.0	161.8	12.23	14.232	
2,800.0	2,788.8	2,793.8	2,777.5	6.4	6.9	102.71	-87.2	245.5	182.5	169.8	12.72	14.342	
2,900.0	2,888.3	2,893.4	2,876.3	6.6	7.1	102.31	-91.3	257.5	191.0	177.7	13.22	14.445	
3,000.0	2,987.8	2,993.1	2,975.1	6.9	7.4	101.94	-95.3	269.5	199.4	185.7	13.72	14.541	
3,100.0	3,087.3	3,092.7	3,073.9	7.1	7.7	101.61	-99.4	281.5	207.9	193.7	14.21	14.631	
3,200.0	3,186.8	3,192.3	3,172.7	7.4	8.0	101.30	-103.5	293.6	216.4	201.7	14.71	14.715	
3,300.0	3,286.3	3,292.0	3,271.6	7.6	8.3	101.01	-107.6	305.6	224.9	209.7	15.20	14.795	
3,400.0	3,385.8	3,391.6	3,370.4	7.9	8.5	100.75	-111.7	317.6	233.4	217.7	15.69	14.870	
3,500.0	3,485.3	3,491.2	3,469.2	8.1	8.8	100.50	-115.8	329.6	241.9	225.7	16.19	14.940	
3,600.0	3,584.8	3,590.9	3,568.0	8.4	9.1	100.27	-119.8	341.6	250.4	233.7	16.68	15.007	
3,700.0	3,684.3	3,690.5	3,666.9	8.6	9.4	100.05	-123.9	353.6	258.9	241.7	17.18	15.070	
3,800.0	3,783.7	3,790.1	3,765.7	8.8	9.7	99.85	-128.0	365.7	267.4	249.7	17.67	15.130	
3,900.0	3,883.2	3,889.8	3,864.5	9.1	10.0	99.66	-132.1	377.7	275.9	257.7	18.17	15.187	
4,000.0	3,982.7	3,989.4	3,963.3	9.3	10.2	99.49	-136.2	389.7	284.4	265.8	18.66	15.241	
4,100.0	4,082.2	4,089.0	4,062.1	9.6	10.5	99.32	-140.2	401.7	293.0	273.8	19.16	15.292	
4,200.0	4,181.7	4,188.7	4,161.0	9.8	10.8	99.16	-144.3	413.7	301.5	281.8	19.65	15.341	
4,300.0	4,281.2	4,288.3	4,259.8	10.1	11.1	99.01	-148.4	425.7	310.0	289.9	20.15	15.388	
4,400.0	4,380.7	4,387.9	4,358.6	10.3	11.4	98.87	-152.5	437.7	318.5	297.9	20.64	15.432	
4,500.0	4,480.2	4,487.6	4,457.4	10.6	11.6	98.74	-156.6	449.8	327.1	305.9	21.13	15.475	
4,600.0	4,579.7	4,587.2	4,556.2	10.8	11.9	98.61	-160.6	461.8	335.6	314.0	21.63	15.515	
4,700.0	4,679.2	4,686.8	4,655.1	11.1	12.2	98.49	-164.7	473.8	344.1	322.0	22.12	15.554	
4,800.0	4,778.7	4,786.5	4,753.9	11.3	12.5	98.37	-168.8	485.8	352.6	330.0	22.62	15.592	
4,900.0	4,878.2	4,886.1	4,852.7	11.6	12.8	98.27	-172.9	497.8	361.2	338.1	23.11	15.627	
5,000.0	4,977.7	4,985.7	4,951.5	11.8	13.1	98.16	-177.0	509.8	369.7	346.1	23.61	15.662	
5,100.0	5,077.2	5,085.4	5,050.4	12.1	13.3	98.06	-181.1	521.9	378.3	354.2	24.10	15.695	

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 2D-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 2D-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	5,176.7	5,185.0	5,149.2	12.3	13.6	97.97	-185.1	533.9	386.8	362.2	24.59	15.727	
5,300.0	5,276.2	5,284.6	5,248.0	12.6	13.9	97.87	-189.2	545.9	395.3	370.2	25.09	15.757	
5,400.0	5,375.7	5,384.3	5,346.8	12.8	14.2	97.79	-193.3	557.9	403.9	378.3	25.58	15.787	
5,500.0	5,475.2	5,483.9	5,445.6	13.1	14.5	97.70	-197.4	569.9	412.4	386.3	26.08	15.815	
5,600.0	5,574.7	5,583.5	5,544.5	13.3	14.7	97.62	-201.5	581.9	421.0	394.4	26.57	15.842	
5,700.0	5,674.1	5,683.2	5,643.3	13.6	15.0	97.55	-205.5	593.9	429.5	402.4	27.07	15.869	
5,800.0	5,773.6	5,782.8	5,742.1	13.8	15.3	97.47	-209.6	606.0	438.0	410.5	27.56	15.894	
5,900.0	5,873.1	5,882.4	5,840.9	14.0	15.6	97.40	-213.7	618.0	446.6	418.5	28.05	15.919	
6,000.0	5,972.6	5,982.1	5,939.7	14.3	15.9	97.33	-217.8	630.0	455.1	426.6	28.55	15.942	
6,100.0	6,072.1	6,081.7	6,038.6	14.5	16.2	97.27	-221.9	642.0	463.7	434.6	29.04	15.965	
6,200.0	6,171.6	6,181.3	6,137.4	14.8	16.4	97.20	-225.9	654.0	472.2	442.7	29.54	15.987	
6,300.0	6,271.1	6,280.9	6,236.2	15.0	16.7	97.14	-230.0	666.0	480.8	450.7	30.03	16.009	
6,400.0	6,370.6	6,380.6	6,335.0	15.3	17.0	97.08	-234.1	678.0	489.3	458.8	30.52	16.030	
6,500.0	6,470.1	6,480.2	6,433.9	15.5	17.3	97.03	-238.2	690.1	497.9	466.8	31.02	16.050	
6,900.0	6,867.7	7,291.1	7,184.5	16.4	18.9	-5.94	-61.0	781.3	477.9	445.1	32.82	14.562	
7,000.0	6,963.7	7,412.9	7,255.1	16.5	19.2	-54.11	37.5	789.9	391.0	363.0	27.96	13.985	
7,100.0	7,053.7	7,427.6	7,262.2	16.6	19.2	-81.68	50.4	790.8	303.2	277.7	25.56	11.865	
7,200.0	7,135.1	7,411.0	7,254.2	16.7	19.2	-90.73	35.9	789.8	225.6	200.2	25.37	8.894	
7,300.0	7,205.2	7,381.6	7,238.9	16.8	19.1	-88.52	10.8	788.0	172.6	147.0	25.52	6.763	
7,364.6	7,243.6	7,358.9	7,226.3	16.9	19.0	-82.65	-8.0	786.4	161.5	135.9	25.66	6.295	SF
7,400.0	7,262.1	7,345.6	7,218.6	17.0	19.0	-78.22	-18.8	785.5	164.8	139.1	25.64	6.427	
7,500.0	7,304.0	7,305.9	7,194.2	17.3	18.9	-62.82	-49.9	782.5	202.2	177.3	24.90	8.117	
7,600.0	7,329.5	7,264.0	7,166.0	17.8	18.9	-47.11	-80.8	779.1	261.3	238.4	22.94	11.391	
7,700.0	7,338.0	7,220.5	7,134.5	18.4	18.8	-34.66	-110.6	775.3	326.2	305.1	21.17	15.408	
7,800.0	7,338.0	7,180.1	7,103.4	19.2	18.8	-30.26	-136.0	771.5	395.4	374.6	20.73	19.072	
7,900.0	7,338.0	7,150.0	7,079.1	20.1	18.7	-27.35	-153.4	768.5	470.9	450.3	20.58	22.883	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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	0.1	-58.7	58.7				
100.0	100.0	99.0	99.0	0.1	0.1	-89.95	0.1	-58.7	58.7	58.4	0.24	241.388	
200.0	200.0	199.0	199.0	0.3	0.3	-89.95	0.1	-58.7	58.7	58.1	0.59	99.190	CC, ES
300.0	300.0	298.2	298.2	0.5	0.5	-156.37	0.6	-59.3	60.1	59.2	0.94	63.958	
400.0	400.0	397.3	397.3	0.7	0.6	-155.75	2.3	-61.2	64.4	63.1	1.29	49.929	
500.0	499.9	496.2	496.1	0.8	0.8	-154.87	5.2	-64.3	71.6	70.0	1.64	43.547	
600.0	599.7	595.2	594.9	1.0	1.0	-154.00	9.1	-68.6	81.5	79.5	2.00	40.687	
700.0	699.4	694.5	694.1	1.3	1.2	-153.70	13.1	-73.0	93.2	90.8	2.37	39.352	
800.0	798.9	793.7	793.0	1.5	1.4	-153.88	17.1	-77.3	106.3	103.6	2.73	38.879	
900.0	898.4	892.7	891.9	1.7	1.6	-154.15	21.1	-81.7	119.9	116.8	3.10	38.629	
1,000.0	997.9	991.8	990.8	2.0	1.8	-154.37	25.1	-86.1	133.5	130.0	3.47	38.422	
1,100.0	1,097.4	1,090.9	1,089.7	2.2	2.0	-154.55	29.1	-90.5	147.1	143.3	3.85	38.249	
1,200.0	1,196.9	1,190.0	1,188.6	2.4	2.2	-154.70	33.1	-94.8	160.7	156.5	4.22	38.102	
1,300.0	1,296.4	1,289.0	1,287.5	2.7	2.4	-154.83	37.1	-99.2	174.3	169.7	4.59	37.977	
1,400.0	1,395.9	1,388.1	1,386.4	2.9	2.6	-154.94	41.2	-103.6	187.9	183.0	4.96	37.868	
1,500.0	1,495.4	1,487.2	1,485.3	3.2	2.8	-155.03	45.2	-108.0	201.5	196.2	5.34	37.774	
1,600.0	1,594.9	1,586.2	1,584.2	3.4	3.0	-155.11	49.2	-112.3	215.1	209.4	5.71	37.691	
1,700.0	1,694.4	1,685.3	1,683.1	3.7	3.2	-155.19	53.2	-116.7	228.7	222.7	6.08	37.617	
1,800.0	1,793.9	1,784.4	1,781.9	3.9	3.4	-155.25	57.2	-121.1	242.3	235.9	6.45	37.551	
1,900.0	1,893.3	1,883.4	1,880.8	4.2	3.6	-155.31	61.2	-125.5	255.9	249.1	6.83	37.492	
2,000.0	1,992.8	1,982.5	1,979.7	4.4	3.8	-155.36	65.2	-129.9	269.6	262.4	7.20	37.439	
2,100.0	2,092.3	2,081.6	2,078.6	4.6	4.0	-155.41	69.2	-134.2	283.2	275.6	7.57	37.390	
2,200.0	2,191.8	2,180.7	2,177.5	4.9	4.2	-155.45	73.2	-138.6	296.8	288.8	7.95	37.346	
2,300.0	2,291.3	2,279.7	2,276.4	5.1	4.4	-155.49	77.2	-143.0	310.4	302.1	8.32	37.306	
2,400.0	2,390.8	2,378.8	2,375.3	5.4	4.6	-155.52	81.2	-147.4	324.0	315.3	8.69	37.269	
2,500.0	2,490.3	2,477.9	2,474.2	5.6	4.8	-155.55	85.2	-151.7	337.6	328.5	9.07	37.235	
2,600.0	2,589.8	2,576.9	2,573.1	5.9	5.0	-155.58	89.2	-156.1	351.2	341.8	9.44	37.204	
2,700.0	2,689.3	2,676.0	2,672.0	6.1	5.2	-155.61	93.2	-160.5	364.8	355.0	9.81	37.175	
2,800.0	2,788.8	2,775.1	2,770.9	6.4	5.4	-155.64	97.2	-164.9	378.4	368.2	10.19	37.148	
2,900.0	2,888.3	2,874.1	2,869.8	6.6	5.6	-155.66	101.2	-169.2	392.0	381.5	10.56	37.122	
3,000.0	2,987.8	2,973.2	2,968.6	6.9	5.8	-155.68	105.3	-173.6	405.6	394.7	10.93	37.099	
3,100.0	3,087.3	3,072.3	3,067.5	7.1	6.0	-155.70	109.3	-178.0	419.2	407.9	11.31	37.077	
3,200.0	3,186.8	3,171.4	3,166.4	7.4	6.2	-155.72	113.3	-182.4	432.8	421.2	11.68	37.056	
3,300.0	3,286.3	3,270.4	3,265.3	7.6	6.4	-155.74	117.3	-186.8	446.4	434.4	12.05	37.037	
3,400.0	3,385.8	3,369.5	3,364.2	7.9	6.6	-155.76	121.3	-191.1	460.1	447.6	12.43	37.018	
3,500.0	3,485.3	3,468.6	3,463.1	8.1	6.8	-155.77	125.3	-195.5	473.7	460.9	12.80	37.001	
3,600.0	3,584.8	3,567.6	3,562.0	8.4	7.0	-155.79	129.3	-199.9	487.3	474.1	13.17	36.985	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 2D-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 2D-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	-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	299.0	299.0	0.5	0.5	-157.08	0.0	-39.1	39.9	39.0	0.94	42.440	
400.0	400.0	399.0	399.0	0.7	0.6	-158.45	0.0	-39.1	42.4	41.1	1.29	32.824	
500.0	499.9	498.9	498.9	0.8	0.8	-160.42	0.0	-39.1	46.4	44.8	1.64	28.315	
600.0	599.7	598.7	598.7	1.0	1.0	-162.64	0.0	-39.1	52.2	50.2	1.99	26.253	
700.0	699.4	698.4	698.4	1.3	1.2	-164.87	0.0	-39.1	59.8	57.4	2.34	25.560	SF
800.0	798.9	797.9	797.9	1.5	1.3	-166.92	0.0	-39.1	69.0	66.3	2.69	25.693	
900.0	898.4	897.4	897.4	1.7	1.5	-168.57	0.0	-39.1	78.8	75.8	3.03	25.975	
1,000.0	997.9	996.9	996.9	2.0	1.7	-169.86	0.0	-39.1	88.7	85.3	3.38	26.217	
1,100.0	1,097.4	1,096.4	1,096.4	2.2	1.9	-170.88	0.0	-39.1	98.6	94.9	3.73	26.425	
1,200.0	1,196.9	1,195.9	1,195.9	2.4	2.0	-171.72	0.0	-39.1	108.5	104.4	4.08	26.605	
1,300.0	1,296.4	1,295.4	1,295.4	2.7	2.2	-172.42	0.0	-39.1	118.5	114.0	4.43	26.762	
1,400.0	1,395.9	1,394.9	1,394.9	2.9	2.4	-173.01	0.0	-39.1	128.4	123.7	4.77	26.899	
1,500.0	1,495.4	1,494.4	1,494.4	3.2	2.6	-173.52	0.0	-39.1	138.4	133.3	5.12	27.020	
1,600.0	1,594.9	1,593.9	1,593.9	3.4	2.7	-173.96	0.0	-39.1	148.4	142.9	5.47	27.128	
1,700.0	1,694.4	1,693.4	1,693.4	3.7	2.9	-174.34	0.0	-39.1	158.4	152.6	5.82	27.224	
1,800.0	1,793.9	1,792.9	1,792.9	3.9	3.1	-174.68	0.0	-39.1	168.4	162.2	6.17	27.310	
1,900.0	1,893.3	1,892.3	1,892.3	4.2	3.3	-174.97	0.0	-39.1	178.4	171.9	6.51	27.388	
2,000.0	1,992.8	1,991.8	1,991.8	4.4	3.4	-175.24	0.0	-39.1	188.4	181.5	6.86	27.458	
2,100.0	2,092.3	2,091.3	2,091.3	4.6	3.6	-175.48	0.0	-39.1	198.4	191.2	7.21	27.523	
2,200.0	2,191.8	2,190.8	2,190.8	4.9	3.8	-175.70	0.0	-39.1	208.4	200.8	7.56	27.581	
2,300.0	2,291.3	2,290.3	2,290.3	5.1	3.9	-175.90	0.0	-39.1	218.4	210.5	7.90	27.635	
2,400.0	2,390.8	2,389.8	2,389.8	5.4	4.1	-176.08	0.0	-39.1	228.4	220.2	8.25	27.685	
2,500.0	2,490.3	2,489.3	2,489.3	5.6	4.3	-176.24	0.0	-39.1	238.4	229.8	8.60	27.731	
2,600.0	2,589.8	2,588.8	2,588.8	5.9	4.5	-176.39	0.0	-39.1	248.5	239.5	8.95	27.773	
2,700.0	2,689.3	2,688.3	2,688.3	6.1	4.6	-176.53	0.0	-39.1	258.5	249.2	9.29	27.813	
2,800.0	2,788.8	2,787.8	2,787.8	6.4	4.8	-176.66	0.0	-39.1	268.5	258.9	9.64	27.849	
2,900.0	2,888.3	2,887.3	2,887.3	6.6	5.0	-176.78	0.0	-39.1	278.5	268.5	9.99	27.884	
3,000.0	2,987.8	2,986.8	2,986.8	6.9	5.2	-176.90	0.0	-39.1	288.6	278.2	10.34	27.916	
3,100.0	3,087.3	3,086.3	3,086.3	7.1	5.3	-177.00	0.0	-39.1	298.6	287.9	10.68	27.946	
3,200.0	3,186.8	3,185.8	3,185.8	7.4	5.5	-177.10	0.0	-39.1	308.6	297.6	11.03	27.974	
3,300.0	3,286.3	3,285.3	3,285.3	7.6	5.7	-177.19	0.0	-39.1	318.6	307.3	11.38	28.000	
3,400.0	3,385.8	3,384.8	3,384.8	7.9	5.9	-177.28	0.0	-39.1	328.7	316.9	11.73	28.025	
3,500.0	3,485.3	3,484.3	3,484.3	8.1	6.0	-177.36	0.0	-39.1	338.7	326.6	12.08	28.049	
3,600.0	3,584.8	3,583.8	3,583.8	8.4	6.2	-177.43	0.0	-39.1	348.7	336.3	12.42	28.071	
3,700.0	3,684.3	3,683.3	3,683.3	8.6	6.4	-177.50	0.0	-39.1	358.8	346.0	12.77	28.093	
3,800.0	3,783.7	3,782.7	3,782.7	8.8	6.5	-177.57	0.0	-39.1	368.8	355.7	13.12	28.113	
3,900.0	3,883.2	3,882.2	3,882.2	9.1	6.7	-177.64	0.0	-39.1	378.8	365.4	13.47	28.132	
4,000.0	3,982.7	3,981.7	3,981.7	9.3	6.9	-177.70	0.0	-39.1	388.9	375.0	13.81	28.150	
4,100.0	4,082.2	4,083.5	4,083.5	9.6	7.1	-177.68	0.6	-39.1	398.7	384.5	14.17	28.142	
4,200.0	4,181.7	4,185.9	4,185.9	9.8	7.3	-177.42	3.0	-39.0	407.8	393.3	14.52	28.083	
4,300.0	4,281.2	4,288.3	4,288.2	10.1	7.4	-176.95	7.3	-38.9	416.2	401.3	14.88	27.976	
4,400.0	4,380.7	4,390.7	4,390.4	10.3	7.6	-176.26	13.3	-38.6	424.0	408.8	15.24	27.826	
4,500.0	4,480.2	4,493.0	4,492.4	10.6	7.8	-175.37	21.2	-38.4	431.3	415.7	15.61	27.634	
4,600.0	4,579.7	4,594.9	4,593.8	10.8	8.0	-174.30	30.9	-38.0	438.0	422.0	15.98	27.407	
4,700.0	4,679.2	4,694.3	4,692.7	11.1	8.2	-173.20	41.0	-37.7	444.6	428.2	16.36	27.181	
4,800.0	4,778.7	4,793.7	4,791.6	11.3	8.4	-172.12	51.1	-37.3	451.4	434.7	16.74	26.965	
4,900.0	4,878.2	4,893.2	4,890.5	11.6	8.6	-171.08	61.2	-36.9	458.3	441.2	17.13	26.759	
5,000.0	4,977.7	4,992.6	4,989.4	11.8	8.8	-170.07	71.4	-36.6	465.4	447.9	17.52	26.563	
5,100.0	5,077.2	5,092.0	5,088.3	12.1	9.0	-169.10	81.5	-36.2	472.7	454.7	17.92	26.376	

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 2D-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 2D-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	5,176.7	5,191.4	5,187.2	12.3	9.2	-168.15	91.6	-35.8	480.0	461.7	18.32	26.197	
5,300.0	5,276.2	5,290.8	5,286.1	12.6	9.4	-167.23	101.7	-35.5	487.5	468.8	18.73	26.027	
5,400.0	5,375.7	5,390.2	5,385.0	12.8	9.6	-166.34	111.9	-35.1	495.1	476.0	19.14	25.865	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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 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	-89.95	0.0	-19.6	19.6				
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	-19.6	19.6	19.3	0.24	80.060	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-19.6	19.6	19.0	0.59	32.966	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	-157.56	0.0	-19.6	20.4	19.4	0.94	21.608	
400.0	400.0	400.0	400.0	0.7	0.6	-160.06	0.0	-19.6	22.8	21.5	1.29	17.655	
500.0	499.9	499.9	499.9	0.8	0.8	-163.21	0.0	-19.6	26.9	25.3	1.64	16.422	
600.0	599.7	600.2	600.2	1.0	1.0	-166.00	0.3	-18.7	32.0	30.0	1.99	16.068	
700.0	699.4	700.7	700.6	1.3	1.2	-168.16	1.2	-16.3	37.1	34.7	2.34	15.834	
800.0	798.9	801.2	801.1	1.5	1.4	-169.90	2.8	-12.1	42.1	39.4	2.69	15.649	
900.0	898.4	901.3	901.0	1.7	1.5	-171.22	4.7	-6.9	46.5	43.5	3.04	15.297	
1,000.0	997.9	1,001.2	1,000.7	2.0	1.7	-172.31	6.7	-1.7	50.9	47.5	3.39	15.019	
1,100.0	1,097.4	1,101.1	1,100.5	2.2	1.9	-173.22	8.6	3.5	55.3	51.6	3.74	14.797	
1,200.0	1,196.9	1,201.0	1,200.2	2.4	2.1	-174.00	10.6	8.7	59.7	55.7	4.09	14.617	
1,300.0	1,296.4	1,300.9	1,300.0	2.7	2.3	-174.67	12.5	13.9	64.2	59.7	4.44	14.468	
1,400.0	1,395.9	1,400.8	1,399.7	2.9	2.5	-175.25	14.5	19.1	68.6	63.8	4.78	14.343	
1,500.0	1,495.4	1,500.7	1,499.4	3.2	2.7	-175.76	16.4	24.4	73.1	67.9	5.13	14.235	
1,600.0	1,594.9	1,600.6	1,599.2	3.4	2.9	-176.22	18.3	29.6	77.5	72.0	5.48	14.142	
1,700.0	1,694.4	1,700.5	1,698.9	3.7	3.1	-176.62	20.3	34.8	82.0	76.2	5.83	14.062	
1,800.0	1,793.9	1,800.4	1,798.7	3.9	3.3	-176.98	22.2	40.0	86.5	80.3	6.18	13.990	
1,900.0	1,893.3	1,900.3	1,898.4	4.2	3.5	-177.31	24.2	45.2	90.9	84.4	6.53	13.927	
2,000.0	1,992.8	2,000.2	1,998.2	4.4	3.7	-177.61	26.1	50.4	95.4	88.5	6.88	13.871	
2,100.0	2,092.3	2,100.1	2,097.9	4.6	3.9	-177.88	28.1	55.7	99.9	92.6	7.23	13.820	
2,200.0	2,191.8	2,200.0	2,197.6	4.9	4.1	-178.12	30.0	60.9	104.3	96.8	7.57	13.774	
2,300.0	2,291.3	2,299.9	2,297.4	5.1	4.3	-178.35	32.0	66.1	108.8	100.9	7.92	13.732	
2,400.0	2,390.8	2,399.8	2,397.1	5.4	4.5	-178.56	33.9	71.3	113.3	105.0	8.27	13.694	
2,500.0	2,490.3	2,499.7	2,496.9	5.6	4.7	-178.75	35.9	76.5	117.8	109.1	8.62	13.659	
2,600.0	2,589.8	2,599.6	2,596.6	5.9	4.9	-178.93	37.8	81.8	122.2	113.3	8.97	13.627	
2,700.0	2,689.3	2,699.5	2,696.4	6.1	5.1	-179.09	39.8	87.0	126.7	117.4	9.32	13.597	
2,800.0	2,788.8	2,799.4	2,796.1	6.4	5.3	-179.25	41.7	92.2	131.2	121.5	9.67	13.570	
2,900.0	2,888.3	2,899.3	2,895.9	6.6	5.5	-179.39	43.6	97.4	135.7	125.7	10.02	13.544	
3,000.0	2,987.8	2,999.2	2,995.6	6.9	5.7	-179.53	45.6	102.6	140.2	129.8	10.37	13.521	
3,100.0	3,087.3	3,099.1	3,095.3	7.1	5.9	-179.65	47.5	107.8	144.7	133.9	10.72	13.499	
3,200.0	3,186.8	3,199.0	3,195.1	7.4	6.1	-179.77	49.5	113.1	149.1	138.1	11.07	13.478	
3,300.0	3,286.3	3,298.8	3,294.8	7.6	6.3	-179.89	51.4	118.3	153.6	142.2	11.41	13.459	
3,400.0	3,385.8	3,398.7	3,394.6	7.9	6.5	-179.99	53.4	123.5	158.1	146.3	11.76	13.440	
3,500.0	3,485.3	3,498.6	3,494.3	8.1	6.7	179.91	55.3	128.7	162.6	150.5	12.11	13.423	
3,600.0	3,584.8	3,598.5	3,594.1	8.4	6.9	179.81	57.3	133.9	167.1	154.6	12.46	13.407	
3,700.0	3,684.3	3,698.4	3,693.8	8.6	7.1	179.73	59.2	139.2	171.6	158.8	12.81	13.392	
3,800.0	3,783.7	3,798.3	3,793.5	8.8	7.3	179.64	61.2	144.4	176.1	162.9	13.16	13.377	
3,900.0	3,883.2	3,898.2	3,893.3	9.1	7.5	179.56	63.1	149.6	180.5	167.0	13.51	13.363	
4,000.0	3,982.7	3,998.1	3,993.0	9.3	7.7	179.48	65.1	154.8	185.0	171.2	13.86	13.350	
4,100.0	4,082.2	4,098.0	4,092.8	9.6	7.9	179.41	67.0	160.0	189.5	175.3	14.21	13.338	
4,200.0	4,181.7	4,197.9	4,192.5	9.8	8.1	179.34	68.9	165.2	194.0	179.5	14.56	13.326	
4,300.0	4,281.2	4,297.8	4,292.3	10.1	8.3	179.27	70.9	170.5	198.5	183.6	14.91	13.315	
4,400.0	4,380.7	4,397.7	4,392.0	10.3	8.5	179.21	72.8	175.7	203.0	187.7	15.26	13.304	
4,500.0	4,480.2	4,497.6	4,491.8	10.6	8.7	179.15	74.8	180.9	207.5	191.9	15.61	13.294	
4,600.0	4,579.7	4,597.5	4,591.5	10.8	8.9	179.09	76.7	186.1	212.0	196.0	15.96	13.285	
4,700.0	4,679.2	4,697.4	4,691.2	11.1	9.1	179.03	78.7	191.3	216.5	200.2	16.31	13.275	
4,800.0	4,778.7	4,797.3	4,791.0	11.3	9.3	178.98	80.6	196.5	220.9	204.3	16.65	13.266	
4,900.0	4,878.2	4,897.2	4,890.7	11.6	9.5	178.93	82.6	201.8	225.4	208.4	17.00	13.258	
5,000.0	4,977.7	4,997.1	4,990.5	11.8	9.7	178.88	84.5	207.0	229.9	212.6	17.35	13.249	
5,100.0	5,077.2	5,097.0	5,090.2	12.1	9.9	178.83	86.5	212.2	234.4	216.7	17.70	13.242	

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 2D-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 2D-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 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	5,176.7	5,196.9	5,190.0	12.3	10.1	178.78	88.4	217.4	238.9	220.9	18.05	13.234	
5,300.0	5,276.2	5,296.8	5,289.7	12.6	10.3	178.74	90.4	222.6	243.4	225.0	18.40	13.227	
5,400.0	5,375.7	5,396.7	5,389.4	12.8	10.5	178.70	92.3	227.9	247.9	229.1	18.75	13.220	
5,500.0	5,475.2	5,496.6	5,489.2	13.1	10.7	178.66	94.2	233.1	252.4	233.3	19.10	13.213	
5,600.0	5,574.7	5,596.5	5,588.9	13.3	10.9	178.62	96.2	238.3	256.9	237.4	19.45	13.206	
5,700.0	5,674.1	5,696.4	5,688.7	13.6	11.1	178.58	98.1	243.5	261.4	241.6	19.80	13.200	
5,800.0	5,773.6	5,796.3	5,788.4	13.8	11.3	178.54	100.1	248.7	265.9	245.7	20.15	13.194	
5,900.0	5,873.1	5,896.2	5,888.2	14.0	11.5	178.51	102.0	253.9	270.4	249.9	20.50	13.188	
6,000.0	5,972.6	5,996.1	5,987.9	14.3	11.7	178.47	104.0	259.2	274.8	254.0	20.85	13.183	
6,100.0	6,072.1	6,096.0	6,087.6	14.5	11.9	178.44	105.9	264.4	279.3	258.1	21.20	13.177	
6,200.0	6,171.6	6,195.9	6,187.4	14.8	12.1	178.41	107.9	269.6	283.8	262.3	21.55	13.172	
6,300.0	6,271.1	6,295.8	6,287.1	15.0	12.3	178.37	109.8	274.8	288.3	266.4	21.90	13.167	
6,400.0	6,370.6	6,395.7	6,386.9	15.3	12.5	178.34	111.8	280.0	292.8	270.6	22.25	13.162	
6,500.0	6,470.1	6,495.6	6,486.6	15.5	12.7	178.31	113.7	285.2	297.3	274.7	22.60	13.157	
6,600.0	6,569.6	6,589.7	6,580.5	15.8	12.8	178.13	114.7	290.2	302.2	279.2	22.94	13.172	
6,700.0	6,669.1	6,672.2	6,662.3	16.0	13.0	176.30	105.9	295.3	311.4	288.1	23.30	13.363	
6,800.0	6,768.6	6,750.0	6,737.5	16.3	13.1	148.15	86.9	300.9	326.8	303.0	23.77	13.750	
6,900.0	6,867.7	6,824.5	6,806.5	16.4	13.2	82.71	59.3	306.8	343.3	319.0	24.32	14.119	
7,000.0	6,963.7	6,900.0	6,872.0	16.5	13.4	66.37	22.5	313.2	357.8	333.0	24.72	14.472	
7,100.0	7,053.7	6,969.0	6,927.2	16.6	13.5	59.15	-18.4	319.4	369.1	344.3	24.86	14.850	
7,200.0	7,135.1	7,039.8	6,978.2	16.7	13.7	54.94	-66.9	325.9	376.9	352.2	24.78	15.214	
7,300.0	7,205.2	7,109.9	7,022.4	16.8	14.0	52.41	-120.8	332.6	380.7	356.2	24.52	15.526	
7,400.0	7,262.1	7,179.6	7,059.5	17.0	14.4	51.03	-179.4	339.2	380.3	356.0	24.22	15.698	
7,500.0	7,304.0	7,250.0	7,089.5	17.3	14.9	50.60	-242.8	345.8	375.5	351.4	24.04	15.616	
7,600.0	7,329.5	7,318.9	7,111.0	17.8	15.4	51.04	-307.9	352.0	366.3	342.2	24.13	15.181	
7,700.0	7,338.0	7,389.0	7,124.7	18.4	16.1	52.34	-376.3	358.2	353.1	328.5	24.63	14.336	
7,800.0	7,338.0	7,460.3	7,130.0	19.2	16.8	52.44	-447.1	364.0	342.1	316.1	26.02	13.146	
7,900.0	7,338.0	7,557.4	7,130.0	20.1	17.9	51.65	-543.9	371.7	335.9	308.3	27.60	12.170	
8,000.0	7,338.0	7,657.1	7,130.0	21.1	19.1	50.81	-643.3	379.5	329.8	300.5	29.28	11.262	
8,100.0	7,338.0	7,756.8	7,130.0	22.2	20.3	49.93	-742.7	387.3	323.7	292.7	31.03	10.433	
8,200.0	7,338.0	7,856.5	7,130.0	23.4	21.7	49.02	-842.1	395.1	317.7	284.9	32.80	9.687	
8,300.0	7,338.0	7,952.7	7,130.0	24.6	23.0	48.19	-938.0	402.0	312.4	277.8	34.59	9.030	
8,400.0	7,338.0	8,048.7	7,130.0	25.9	24.4	47.53	-1,033.9	407.3	308.3	271.8	36.45	8.456	
8,500.0	7,338.0	8,144.8	7,130.0	27.3	25.8	47.07	-1,130.0	411.0	305.4	267.0	38.41	7.952	
8,600.0	7,338.0	8,243.9	7,130.0	28.7	27.3	46.73	-1,229.0	413.7	303.5	263.0	40.47	7.499	
8,700.0	7,338.0	8,343.9	7,130.0	30.1	28.8	46.39	-1,329.0	416.3	301.6	259.0	42.56	7.087	
8,800.0	7,338.0	8,443.9	7,130.0	31.6	30.3	46.04	-1,428.9	418.9	299.7	255.1	44.64	6.713	
8,900.0	7,338.0	8,543.8	7,130.0	33.0	31.9	45.69	-1,528.8	421.5	297.8	251.1	46.73	6.374	
9,000.0	7,338.0	8,643.8	7,130.0	34.6	33.5	45.34	-1,628.8	424.1	296.0	247.2	48.80	6.065	
9,100.0	7,338.0	8,743.8	7,130.0	36.1	35.1	44.98	-1,728.7	426.7	294.1	243.2	50.86	5.782	
9,200.0	7,338.0	8,843.7	7,130.0	37.7	36.7	44.62	-1,828.6	429.4	292.3	239.3	52.91	5.524	
9,300.0	7,338.0	8,943.7	7,130.0	39.2	38.3	44.25	-1,928.6	432.0	290.4	235.5	54.93	5.287	
9,400.0	7,338.0	9,043.7	7,130.0	40.8	40.0	43.88	-2,028.5	434.6	288.6	231.7	56.94	5.069	
9,500.0	7,338.0	9,143.6	7,130.0	42.4	41.6	43.50	-2,128.4	437.2	286.8	227.9	58.92	4.868	
9,600.0	7,338.0	9,243.6	7,130.0	44.0	43.3	43.12	-2,228.3	439.8	285.0	224.1	60.87	4.682	
9,700.0	7,338.0	9,343.6	7,130.0	45.7	44.9	42.73	-2,328.3	442.4	283.2	220.4	62.79	4.511	
9,800.0	7,338.0	9,443.5	7,130.0	47.3	46.6	42.34	-2,428.2	445.1	281.4	216.8	64.67	4.352	
9,900.0	7,338.0	9,543.5	7,130.0	48.9	48.3	41.94	-2,528.1	447.7	279.7	213.2	66.53	4.204	
10,000.0	7,338.0	9,643.5	7,130.0	50.6	50.0	41.54	-2,628.1	450.3	277.9	209.6	68.34	4.067	
10,100.0	7,338.0	9,743.4	7,130.0	52.3	51.7	41.14	-2,728.0	452.9	276.2	206.1	70.12	3.939	
10,200.0	7,338.0	9,843.4	7,130.0	53.9	53.3	40.72	-2,827.9	455.5	274.5	202.6	71.87	3.820	
10,300.0	7,338.0	9,943.4	7,130.0	55.6	55.0	40.31	-2,927.9	458.1	272.8	199.2	73.56	3.708	

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 2D-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 2D-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 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
10,400.0	7,338.0	10,043.3	7,130.0	57.3	56.7	39.89	-3,027.8	460.8	271.1	195.9	75.22	3.604	
10,500.0	7,338.0	10,143.3	7,130.0	58.9	58.4	39.46	-3,127.7	463.4	269.4	192.6	76.83	3.507	
10,600.0	7,338.0	10,243.3	7,130.0	60.6	60.1	39.03	-3,227.7	466.0	267.8	189.4	78.40	3.416	
10,700.0	7,338.0	10,343.2	7,130.0	62.3	61.9	38.59	-3,327.6	468.6	266.1	186.2	79.92	3.330	
10,800.0	7,338.0	10,443.2	7,130.0	64.0	63.6	38.15	-3,427.5	471.2	264.5	183.1	81.39	3.250	
10,900.0	7,338.0	10,543.2	7,130.0	65.7	65.3	37.70	-3,527.5	473.8	262.9	180.1	82.81	3.175	
11,000.0	7,338.0	10,643.1	7,130.0	67.4	67.0	37.24	-3,627.4	476.5	261.3	177.1	84.18	3.104	
11,100.0	7,338.0	10,743.1	7,130.0	69.1	68.7	36.78	-3,727.3	479.1	259.7	174.2	85.49	3.038	
11,200.0	7,338.0	10,843.1	7,130.0	70.8	70.4	36.32	-3,827.2	481.7	258.2	171.4	86.75	2.976	
11,300.0	7,338.0	10,943.0	7,130.0	72.5	72.1	35.85	-3,927.2	484.3	256.6	168.7	87.95	2.918	
11,400.0	7,338.0	11,043.0	7,130.0	74.2	73.9	35.37	-4,027.1	486.9	255.1	166.0	89.10	2.863	
11,500.0	7,338.0	11,143.0	7,130.0	75.9	75.6	34.89	-4,127.0	489.5	253.6	163.4	90.18	2.812	
11,600.0	7,338.0	11,242.9	7,130.0	77.6	77.3	34.40	-4,227.0	492.2	252.1	160.9	91.21	2.764	
11,700.0	7,338.0	11,342.9	7,130.0	79.3	79.0	33.91	-4,326.9	494.8	250.6	158.5	92.17	2.719	
11,800.0	7,338.0	11,442.9	7,130.0	81.0	80.8	33.41	-4,426.8	497.4	249.2	156.1	93.07	2.677	
11,900.0	7,338.0	11,542.8	7,130.0	82.8	82.5	32.90	-4,526.8	500.0	247.8	153.9	93.91	2.638	
12,000.0	7,338.0	11,642.8	7,130.0	84.5	84.2	32.39	-4,626.7	502.6	246.4	151.7	94.68	2.602	
12,100.0	7,338.0	11,742.7	7,130.0	86.2	85.9	31.88	-4,726.6	505.2	245.0	149.6	95.38	2.568	
12,200.0	7,338.0	11,842.7	7,130.0	87.9	87.7	31.35	-4,826.6	507.9	243.6	147.6	96.01	2.537	
12,300.0	7,338.0	11,942.7	7,130.0	89.6	89.4	30.82	-4,926.5	510.5	242.2	145.7	96.58	2.508	
12,400.0	7,338.0	12,041.1	7,130.0	91.4	91.1	30.40	-5,024.9	512.6	241.2	143.8	97.32	2.478	
12,477.5	7,338.0	12,117.0	7,130.0	92.7	92.4	30.29	-5,100.7	513.1	240.9	142.5	98.43	2.447	
12,500.0	7,338.0	12,139.0	7,130.0	93.1	92.8	30.30	-5,122.8	513.0	240.9	142.1	98.84	2.437	
12,600.0	7,338.0	12,236.9	7,130.0	94.8	94.5	30.55	-5,220.7	511.8	241.5	140.3	101.24	2.386	
12,700.0	7,338.0	12,334.7	7,130.0	96.5	96.2	31.14	-5,318.5	508.9	243.1	138.5	104.53	2.325	
12,800.0	7,338.0	12,432.4	7,130.0	98.3	97.9	32.04	-5,416.1	504.4	245.5	136.8	108.73	2.258	
12,900.0	7,338.0	12,530.0	7,130.0	100.0	99.5	33.25	-5,513.4	498.2	248.9	135.1	113.80	2.187	
13,000.0	7,338.0	12,627.5	7,130.0	101.7	101.2	34.74	-5,610.6	490.3	253.4	133.7	119.70	2.117	
13,100.0	7,338.0	12,727.1	7,130.0	103.5	102.9	36.32	-5,709.9	481.7	258.5	132.5	125.98	2.052	
13,200.0	7,338.0	12,826.7	7,130.0	105.2	104.7	37.85	-5,809.1	473.0	263.8	131.6	132.17	1.996	
13,300.0	7,338.0	12,926.4	7,130.0	106.9	106.4	39.31	-5,908.3	464.3	269.2	131.0	138.27	1.947	
13,400.0	7,338.0	13,026.0	7,130.0	108.7	108.1	40.71	-6,007.6	455.6	274.9	130.6	144.29	1.905	
13,500.0	7,338.0	13,125.6	7,130.0	110.4	109.8	42.06	-6,106.8	446.9	280.6	130.4	150.21	1.868	
13,600.0	7,338.0	13,225.2	7,130.0	112.1	111.5	43.35	-6,206.1	438.2	286.6	130.5	156.03	1.837	
13,700.0	7,338.0	13,324.8	7,130.0	113.9	113.2	44.59	-6,305.3	429.5	292.6	130.9	161.76	1.809	
13,800.0	7,338.0	13,424.5	7,130.0	115.6	115.0	45.78	-6,404.5	420.8	298.8	131.4	167.40	1.785	
13,900.0	7,338.0	13,524.1	7,130.0	117.3	116.7	46.92	-6,503.8	412.1	305.2	132.2	172.94	1.764	
14,000.0	7,338.0	13,623.7	7,130.0	119.1	118.4	48.01	-6,603.0	403.5	311.6	133.2	178.40	1.747	
14,100.0	7,338.0	13,723.3	7,130.0	120.8	120.1	49.06	-6,702.2	394.8	318.1	134.4	183.77	1.731	
14,200.0	7,338.0	13,822.9	7,130.0	122.5	121.9	50.07	-6,801.5	386.1	324.8	135.7	189.06	1.718	
14,300.0	7,338.0	13,922.5	7,130.0	124.3	123.6	51.04	-6,900.7	377.4	331.5	137.3	194.27	1.707	
14,400.0	7,338.0	14,022.2	7,130.0	126.0	125.3	51.96	-7,000.0	368.7	338.4	139.0	199.40	1.697	
14,500.0	7,338.0	14,121.8	7,130.0	127.7	127.0	52.85	-7,099.2	360.0	345.3	140.8	204.46	1.689	
14,600.0	7,338.0	14,221.4	7,130.0	129.5	128.8	53.71	-7,198.4	351.3	352.3	142.8	209.45	1.682	
14,700.0	7,338.0	14,321.0	7,130.0	131.2	130.5	54.53	-7,297.7	342.6	359.4	145.0	214.37	1.676	
14,800.0	7,338.0	14,420.6	7,130.0	133.0	132.2	55.32	-7,396.9	333.9	366.5	147.3	219.23	1.672	
14,900.0	7,338.0	14,520.3	7,130.0	134.7	134.0	56.08	-7,496.2	325.3	373.7	149.7	224.03	1.668	
15,000.0	7,338.0	14,619.9	7,130.0	136.4	135.7	56.81	-7,595.4	316.6	381.0	152.2	228.77	1.665	
15,100.0	7,338.0	14,719.5	7,130.0	138.2	137.4	57.52	-7,694.6	307.9	388.3	154.9	233.45	1.663	
15,135.9	7,338.0	14,755.2	7,130.0	138.8	138.0	57.76	-7,730.2	304.8	391.0	155.9	235.12	1.663	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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
7,200.0	7,135.1	7,176.9	7,028.3	16.7	20.4	-62.45	-24.5	1,072.8	495.7	470.1	25.55	19.399	
7,300.0	7,205.2	7,250.0	7,065.7	16.8	20.6	-61.83	-86.9	1,066.7	491.6	466.2	25.40	19.358	
7,400.0	7,262.1	7,310.8	7,090.7	17.0	20.8	-61.44	-142.1	1,062.5	488.4	463.2	25.11	19.446	
7,500.0	7,304.0	7,377.2	7,111.1	17.3	21.0	-61.01	-205.1	1,058.8	485.5	460.5	25.09	19.351	
7,600.0	7,329.5	7,450.0	7,125.1	17.8	21.4	-60.82	-276.5	1,056.0	482.9	457.4	25.52	18.922	
7,700.0	7,338.0	7,509.9	7,129.8	18.4	21.7	-61.06	-336.2	1,054.6	480.1	453.7	26.38	18.198	
7,800.0	7,338.0	7,602.1	7,130.0	19.2	22.3	-61.02	-428.3	1,053.4	478.8	450.9	27.98	17.115	
7,900.0	7,338.0	7,702.1	7,130.0	20.1	23.1	-60.95	-528.3	1,052.2	477.8	447.9	29.85	16.004	
8,000.0	7,338.0	7,802.1	7,130.0	21.1	23.9	-60.88	-628.3	1,051.0	476.7	444.8	31.91	14.939	
8,100.0	7,338.0	7,902.1	7,130.0	22.2	24.9	-60.81	-728.3	1,049.8	475.7	441.5	34.12	13.942	
8,200.0	7,338.0	8,002.1	7,130.0	23.4	25.9	-60.73	-828.3	1,048.6	474.6	438.2	36.44	13.024	
8,300.0	7,338.0	8,102.1	7,130.0	24.6	27.0	-60.66	-928.3	1,047.4	473.5	434.7	38.86	12.185	
8,400.0	7,338.0	8,202.1	7,130.0	25.9	28.2	-60.59	-1,028.2	1,046.1	472.5	431.1	41.36	11.422	
8,500.0	7,338.0	8,302.0	7,130.0	27.3	29.4	-60.52	-1,128.2	1,044.9	471.4	427.5	43.93	10.731	
8,600.0	7,338.0	8,402.0	7,130.0	28.7	30.7	-60.44	-1,228.2	1,043.7	470.4	423.8	46.55	10.105	
8,700.0	7,338.0	8,502.0	7,130.0	30.1	32.0	-60.37	-1,328.2	1,042.5	469.3	420.1	49.21	9.537	
8,800.0	7,338.0	8,602.0	7,130.0	31.6	33.4	-60.30	-1,428.2	1,041.3	468.3	416.3	51.91	9.020	
8,900.0	7,338.0	8,702.0	7,130.0	33.0	34.8	-60.22	-1,528.2	1,040.1	467.2	412.6	54.64	8.551	
9,000.0	7,338.0	8,802.0	7,130.0	34.6	36.2	-60.15	-1,628.2	1,038.9	466.2	408.8	57.39	8.122	
9,100.0	7,338.0	8,902.0	7,130.0	36.1	37.7	-60.08	-1,728.1	1,037.7	465.1	404.9	60.17	7.730	
9,200.0	7,338.0	9,002.0	7,130.0	37.7	39.2	-60.00	-1,828.1	1,036.4	464.0	401.1	62.96	7.370	
9,300.0	7,338.0	9,102.0	7,130.0	39.2	40.7	-59.93	-1,928.1	1,035.2	463.0	397.2	65.77	7.040	
9,400.0	7,338.0	9,202.0	7,130.0	40.8	42.2	-59.85	-2,028.1	1,034.0	461.9	393.4	68.59	6.735	
9,500.0	7,338.0	9,302.0	7,130.0	42.4	43.7	-59.78	-2,128.1	1,032.8	460.9	389.5	71.41	6.454	
9,600.0	7,338.0	9,402.0	7,130.0	44.0	45.3	-59.70	-2,228.1	1,031.6	459.8	385.6	74.25	6.193	
9,700.0	7,338.0	9,502.0	7,130.0	45.7	46.9	-59.62	-2,328.0	1,030.4	458.8	381.7	77.09	5.951	
9,800.0	7,338.0	9,601.9	7,130.0	47.3	48.5	-59.55	-2,428.0	1,029.2	457.8	377.8	79.94	5.726	
9,900.0	7,338.0	9,701.9	7,130.0	48.9	50.0	-59.47	-2,528.0	1,027.9	456.7	373.9	82.80	5.516	
10,000.0	7,338.0	9,801.9	7,130.0	50.6	51.7	-59.39	-2,628.0	1,026.7	455.7	370.0	85.65	5.320	
10,100.0	7,338.0	9,901.9	7,130.0	52.3	53.3	-59.31	-2,728.0	1,025.5	454.6	366.1	88.51	5.136	
10,200.0	7,338.0	10,001.9	7,130.0	53.9	54.9	-59.23	-2,828.0	1,024.3	453.6	362.2	91.37	4.964	
10,300.0	7,338.0	10,101.9	7,130.0	55.6	56.5	-59.16	-2,928.0	1,023.1	452.5	358.3	94.23	4.802	
10,400.0	7,338.0	10,201.9	7,130.0	57.3	58.2	-59.08	-3,027.9	1,021.9	451.5	354.4	97.09	4.650	
10,500.0	7,338.0	10,301.9	7,130.0	58.9	59.8	-59.00	-3,127.9	1,020.7	450.5	350.5	99.95	4.507	
10,600.0	7,338.0	10,401.9	7,130.0	60.6	61.5	-58.92	-3,227.9	1,019.4	449.4	346.6	102.81	4.371	
10,700.0	7,338.0	10,501.9	7,130.0	62.3	63.1	-58.84	-3,327.9	1,018.2	448.4	342.7	105.67	4.243	
10,800.0	7,338.0	10,601.9	7,130.0	64.0	64.8	-58.76	-3,427.9	1,017.0	447.3	338.8	108.53	4.122	
10,900.0	7,338.0	10,701.9	7,130.0	65.7	66.4	-58.68	-3,527.9	1,015.8	446.3	334.9	111.38	4.007	
11,000.0	7,338.0	10,801.9	7,130.0	67.4	68.1	-58.60	-3,627.9	1,014.6	445.3	331.0	114.24	3.898	
11,100.0	7,338.0	10,901.9	7,130.0	69.1	69.8	-58.51	-3,727.8	1,013.4	444.2	327.1	117.09	3.794	
11,200.0	7,338.0	11,001.8	7,130.0	70.8	71.5	-58.43	-3,827.8	1,012.2	443.2	323.3	119.93	3.695	
11,300.0	7,338.0	11,101.8	7,130.0	72.5	73.2	-58.35	-3,927.8	1,011.0	442.2	319.4	122.78	3.601	
11,400.0	7,338.0	11,201.8	7,130.0	74.2	74.8	-58.27	-4,027.8	1,009.7	441.1	315.5	125.62	3.512	
11,500.0	7,338.0	11,301.8	7,130.0	75.9	76.5	-58.18	-4,127.8	1,008.5	440.1	311.6	128.45	3.426	
11,600.0	7,338.0	11,401.8	7,130.0	77.6	78.2	-58.10	-4,227.8	1,007.3	439.1	307.8	131.29	3.344	
11,700.0	7,338.0	11,501.8	7,130.0	79.3	79.9	-58.02	-4,327.8	1,006.1	438.0	303.9	134.11	3.266	
11,800.0	7,338.0	11,601.8	7,130.0	81.0	81.6	-57.93	-4,427.7	1,004.9	437.0	300.1	136.94	3.191	
11,900.0	7,338.0	11,701.8	7,130.0	82.8	83.3	-57.85	-4,527.7	1,003.7	436.0	296.2	139.76	3.119	
12,000.0	7,338.0	11,801.8	7,130.0	84.5	85.0	-57.76	-4,627.7	1,002.5	434.9	292.4	142.57	3.051	
12,100.0	7,338.0	11,901.8	7,130.0	86.2	86.7	-57.68	-4,727.7	1,001.2	433.9	288.5	145.38	2.985	
12,200.0	7,338.0	12,001.8	7,130.0	87.9	88.4	-57.59	-4,827.7	1,000.0	432.9	284.7	148.19	2.921	
12,300.0	7,338.0	12,101.8	7,130.0	89.6	90.1	-57.51	-4,927.7	998.8	431.9	280.9	150.99	2.860	

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 2D-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 2D-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
12,400.0	7,338.0	12,201.8	7,130.0	91.4	91.8	-57.42	-5,027.7	997.6	430.8	277.1	153.78	2.802	
12,500.0	7,338.0	12,301.7	7,130.0	93.1	93.6	-57.33	-5,127.6	996.4	429.8	273.3	156.57	2.745	
12,600.0	7,338.0	12,401.7	7,130.0	94.8	95.3	-57.24	-5,227.6	995.2	428.8	269.4	159.36	2.691	
12,700.0	7,338.0	12,501.7	7,130.0	96.5	97.0	-57.16	-5,327.6	994.0	427.8	265.6	162.14	2.638	
12,800.0	7,338.0	12,601.7	7,130.0	98.3	98.7	-57.07	-5,427.6	992.7	426.8	261.9	164.91	2.588	
12,900.0	7,338.0	12,701.7	7,130.0	100.0	100.4	-56.98	-5,527.6	991.5	425.7	258.1	167.68	2.539	
13,000.0	7,338.0	12,801.7	7,130.0	101.7	102.1	-56.89	-5,627.6	990.3	424.7	254.3	170.44	2.492	
13,100.0	7,338.0	12,901.7	7,130.0	103.5	103.8	-56.80	-5,727.5	989.1	423.7	250.5	173.19	2.447	
13,200.0	7,338.0	13,001.7	7,130.0	105.2	105.6	-56.71	-5,827.5	987.9	422.7	246.8	175.94	2.403	
13,300.0	7,338.0	13,101.7	7,130.0	106.9	107.3	-56.62	-5,927.5	986.7	421.7	243.0	178.68	2.360	
13,400.0	7,338.0	13,201.7	7,130.0	108.7	109.0	-56.53	-6,027.5	985.5	420.7	239.3	181.42	2.319	
13,500.0	7,338.0	13,301.7	7,130.0	110.4	110.7	-56.44	-6,127.5	984.3	419.7	235.5	184.14	2.279	
13,600.0	7,338.0	13,401.7	7,130.0	112.1	112.5	-56.34	-6,227.5	983.0	418.6	231.8	186.87	2.240	
13,700.0	7,338.0	13,501.7	7,130.0	113.9	114.2	-56.25	-6,327.5	981.8	417.6	228.1	189.58	2.203	
13,800.0	7,338.0	13,601.7	7,130.0	115.6	115.9	-56.16	-6,427.4	980.6	416.6	224.3	192.29	2.167	
13,900.0	7,338.0	13,701.6	7,130.0	117.3	117.6	-56.07	-6,527.4	979.4	415.6	220.6	194.99	2.132	
14,000.0	7,338.0	13,801.6	7,130.0	119.1	119.4	-55.97	-6,627.4	978.2	414.6	216.9	197.68	2.097	
14,100.0	7,338.0	13,901.6	7,130.0	120.8	121.1	-55.88	-6,727.4	977.0	413.6	213.2	200.37	2.064	
14,200.0	7,338.0	14,001.6	7,130.0	122.5	122.8	-55.78	-6,827.4	975.8	412.6	209.6	203.05	2.032	
14,300.0	7,338.0	14,101.6	7,130.0	124.3	124.6	-55.69	-6,927.4	974.5	411.6	205.9	205.72	2.001	
14,400.0	7,338.0	14,201.6	7,130.0	126.0	126.3	-55.59	-7,027.4	973.3	410.6	202.2	208.38	1.970	
14,500.0	7,338.0	14,301.6	7,130.0	127.7	128.0	-55.50	-7,127.3	972.1	409.6	198.6	211.04	1.941	
14,600.0	7,338.0	14,401.6	7,130.0	129.5	129.7	-55.40	-7,227.3	970.9	408.6	194.9	213.69	1.912	
14,700.0	7,338.0	14,501.6	7,130.0	131.2	131.5	-55.30	-7,327.3	969.7	407.6	191.3	216.33	1.884	
14,800.0	7,338.0	14,601.6	7,130.0	133.0	133.2	-55.21	-7,427.3	968.5	406.6	187.6	218.96	1.857	
14,900.0	7,338.0	14,701.6	7,130.0	134.7	134.9	-55.11	-7,527.3	967.3	405.6	184.0	221.59	1.830	
15,000.0	7,338.0	14,801.6	7,130.0	136.4	136.7	-55.01	-7,627.3	966.1	404.6	180.4	224.20	1.805	
15,100.0	7,338.0	14,901.6	7,130.0	138.2	138.4	-54.91	-7,727.3	964.8	403.6	176.8	226.81	1.780	
15,135.9	7,338.0	14,933.4	7,130.0	138.8	139.0	-54.88	-7,759.1	964.4	403.3	175.6	227.70	1.771	CC
15,135.9	7,338.0	14,933.4	7,130.0	138.8	139.0	-54.88	-7,759.1	964.4	403.3	175.6	227.70	1.771	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2D-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 2D-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 2D-5H-E267
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.37°