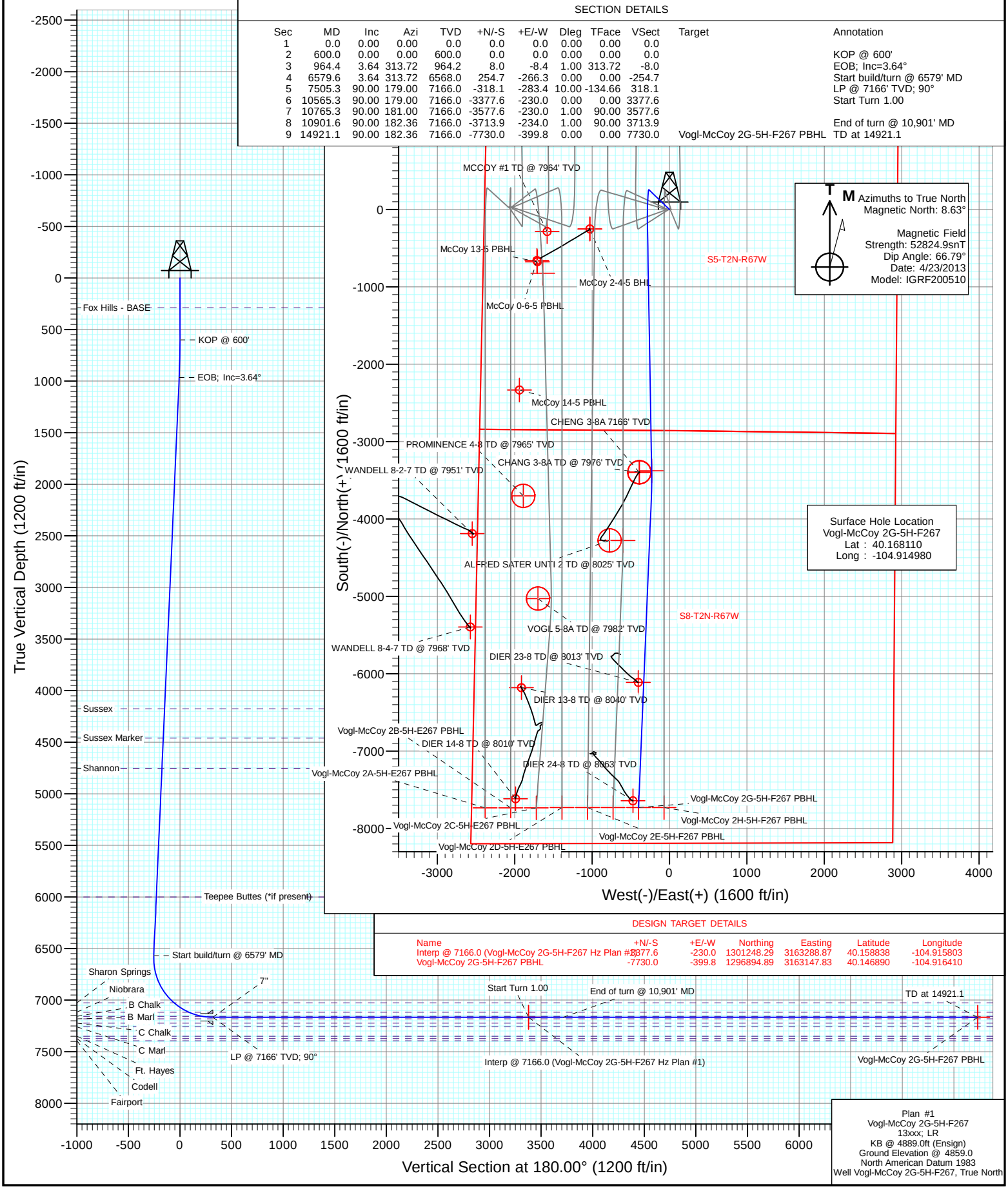
encana

Project: DJ Wattenberg
Site: S5-T2N-R67W (Vogl-McCoy)
Well: Vogl-McCoy 2G-5H-F267
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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0		KOP @ 600'
3	964.4	3.64	313.72	964.2	8.0	-8.4	1.00	313.72	-8.0		EOB; Inc=3.64°
4	6579.6	3.64	313.72	6568.0	254.7	-266.3	0.00	0.00	-254.7		Start build/turn @ 6579' MD
5	7505.3	90.00	179.00	7166.0	-318.1	-283.4	10.00	-134.66	318.1		LP @ 7166' TVD; 90°
6	10565.3	90.00	179.00	7166.0	-3377.6	-230.0	0.00	0.00	3377.6		Start Turn 1.00
7	10765.3	90.00	181.00	7166.0	-3577.6	-230.0	1.00	90.00	3577.6		
8	10901.6	90.00	182.36	7166.0	-3713.9	-234.0	1.00	90.00	3713.9		End of turn @ 10,901' MD
9	14921.1	90.00	182.36	7166.0	-7730.0	-399.8	0.00	0.00	7730.0	Vogl-McCoy 2G-5H-F267 PBHL	TD at 14921.1



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Interp @ 7166.0 (Vogl-McCoy 2G-5H-F267 Hz Plan #1)	-3377.6	-230.0	1301248.29	3163288.87	40.158838	-104.915803
Vogl-McCoy 2G-5H-F267 PBHL	-7730.0	-399.8	1296894.89	3163147.83	40.146890	-104.916410

Plan #1
Vogl-McCoy 2G-5H-F267
13xxx; LR
KB @ 4889.0ft (Ensign)
Ground Elevation @ 4859.0
North American Datum 1983
Well Vogl-McCoy 2G-5H-F267, True North

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2G-5H-F267	**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 2G-5H-F267

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,304,627.37 ft	**Latitude:**	40.168110
	+E/-W	0.0 ft	**Easting:**	3,163,496.58 ft	**Longitude:**	-104.914980
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,859.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	4/23/2013	8.63	66.79	52,825

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
964.4	3.64	313.72	964.2	8.0	-8.4	1.00	1.00	0.00	313.72	
6,579.6	3.64	313.72	6,568.0	254.7	-266.3	0.00	0.00	0.00	0.00	
7,505.3	90.00	179.00	7,166.0	-318.1	-283.4	10.00	9.33	-14.55	-134.66	
10,565.3	90.00	179.00	7,166.0	-3,377.6	-230.0	0.00	0.00	0.00	0.00	Interp @ 7166.0 (Vog
10,765.3	90.00	181.00	7,166.0	-3,577.6	-230.0	1.00	0.00	1.00	90.00	
10,901.6	90.00	182.36	7,166.0	-3,713.9	-234.0	1.00	0.00	1.00	90.00	
14,921.1	90.00	182.36	7,166.0	-7,730.0	-399.8	0.00	0.00	0.00	0.00	Vogl-McCoy 2G-5H-F

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Project:	DJ Wattenberg	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2G-5H-F267	**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	
289.0	0.00	0.00	289.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
700.0	1.00	313.72	700.0	0.6	-0.6	-0.6	1.00	1.00	
800.0	2.00	313.72	800.0	2.4	-2.5	-2.4	1.00	1.00	
900.0	3.00	313.72	899.9	5.4	-5.7	-5.4	1.00	1.00	
964.4	3.64	313.72	964.2	8.0	-8.4	-8.0	1.00	1.00	EOB; Inc=3.64°
1,000.0	3.64	313.72	999.7	9.6	-10.0	-9.6	0.00	0.00	
1,100.0	3.64	313.72	1,099.5	14.0	-14.6	-14.0	0.00	0.00	
1,200.0	3.64	313.72	1,199.3	18.4	-19.2	-18.4	0.00	0.00	
1,300.0	3.64	313.72	1,299.1	22.7	-23.8	-22.7	0.00	0.00	
1,400.0	3.64	313.72	1,398.9	27.1	-28.4	-27.1	0.00	0.00	
1,500.0	3.64	313.72	1,498.7	31.5	-33.0	-31.5	0.00	0.00	
1,600.0	3.64	313.72	1,598.5	35.9	-37.6	-35.9	0.00	0.00	
1,700.0	3.64	313.72	1,698.3	40.3	-42.2	-40.3	0.00	0.00	
1,800.0	3.64	313.72	1,798.1	44.7	-46.8	-44.7	0.00	0.00	
1,900.0	3.64	313.72	1,897.9	49.1	-51.4	-49.1	0.00	0.00	
2,000.0	3.64	313.72	1,997.7	53.5	-55.9	-53.5	0.00	0.00	
2,100.0	3.64	313.72	2,097.5	57.9	-60.5	-57.9	0.00	0.00	
2,200.0	3.64	313.72	2,197.3	62.3	-65.1	-62.3	0.00	0.00	
2,300.0	3.64	313.72	2,297.1	66.7	-69.7	-66.7	0.00	0.00	
2,400.0	3.64	313.72	2,396.9	71.1	-74.3	-71.1	0.00	0.00	
2,500.0	3.64	313.72	2,496.6	75.5	-78.9	-75.5	0.00	0.00	
2,600.0	3.64	313.72	2,596.4	79.9	-83.5	-79.9	0.00	0.00	
2,700.0	3.64	313.72	2,696.2	84.2	-88.1	-84.2	0.00	0.00	
2,800.0	3.64	313.72	2,796.0	88.6	-92.7	-88.6	0.00	0.00	
2,900.0	3.64	313.72	2,895.8	93.0	-97.3	-93.0	0.00	0.00	
3,000.0	3.64	313.72	2,995.6	97.4	-101.9	-97.4	0.00	0.00	
3,100.0	3.64	313.72	3,095.4	101.8	-106.5	-101.8	0.00	0.00	
3,200.0	3.64	313.72	3,195.2	106.2	-111.1	-106.2	0.00	0.00	
3,300.0	3.64	313.72	3,295.0	110.6	-115.7	-110.6	0.00	0.00	
3,400.0	3.64	313.72	3,394.8	115.0	-120.3	-115.0	0.00	0.00	
3,500.0	3.64	313.72	3,494.6	119.4	-124.9	-119.4	0.00	0.00	
3,600.0	3.64	313.72	3,594.4	123.8	-129.5	-123.8	0.00	0.00	
3,700.0	3.64	313.72	3,694.2	128.2	-134.0	-128.2	0.00	0.00	
3,800.0	3.64	313.72	3,794.0	132.6	-138.6	-132.6	0.00	0.00	
3,900.0	3.64	313.72	3,893.8	137.0	-143.2	-137.0	0.00	0.00	
4,000.0	3.64	313.72	3,993.6	141.4	-147.8	-141.4	0.00	0.00	
4,100.0	3.64	313.72	4,093.4	145.7	-152.4	-145.7	0.00	0.00	
4,182.8	3.64	313.72	4,176.0	149.4	-156.2	-149.4	0.00	0.00	Sussex
4,200.0	3.64	313.72	4,193.2	150.1	-157.0	-150.1	0.00	0.00	
4,300.0	3.64	313.72	4,293.0	154.5	-161.6	-154.5	0.00	0.00	
4,400.0	3.64	313.72	4,392.8	158.9	-166.2	-158.9	0.00	0.00	
4,467.3	3.64	313.72	4,460.0	161.9	-169.3	-161.9	0.00	0.00	Sussex Marker
4,500.0	3.64	313.72	4,492.6	163.3	-170.8	-163.3	0.00	0.00	
4,600.0	3.64	313.72	4,592.4	167.7	-175.4	-167.7	0.00	0.00	
4,700.0	3.64	313.72	4,692.2	172.1	-180.0	-172.1	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2G-5H-F267	**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
4,759.9	3.64	313.72	4,752.0	174.7	-182.7	-174.7	0.00	0.00	Shannon
4,800.0	3.64	313.72	4,792.0	176.5	-184.6	-176.5	0.00	0.00	
4,900.0	3.64	313.72	4,891.8	180.9	-189.2	-180.9	0.00	0.00	
5,000.0	3.64	313.72	4,991.6	185.3	-193.8	-185.3	0.00	0.00	
5,100.0	3.64	313.72	5,091.4	189.7	-198.4	-189.7	0.00	0.00	
5,200.0	3.64	313.72	5,191.2	194.1	-203.0	-194.1	0.00	0.00	
5,300.0	3.64	313.72	5,291.0	198.5	-207.5	-198.5	0.00	0.00	
5,400.0	3.64	313.72	5,390.8	202.9	-212.1	-202.9	0.00	0.00	
5,500.0	3.64	313.72	5,490.6	207.2	-216.7	-207.2	0.00	0.00	
5,600.0	3.64	313.72	5,590.4	211.6	-221.3	-211.6	0.00	0.00	
5,700.0	3.64	313.72	5,690.2	216.0	-225.9	-216.0	0.00	0.00	
5,800.0	3.64	313.72	5,790.0	220.4	-230.5	-220.4	0.00	0.00	
5,900.0	3.64	313.72	5,889.8	224.8	-235.1	-224.8	0.00	0.00	
6,000.0	3.64	313.72	5,989.6	229.2	-239.7	-229.2	0.00	0.00	
6,010.4	3.64	313.72	6,000.0	229.7	-240.2	-229.7	0.00	0.00	Teepee Buttes (*if present)
6,100.0	3.64	313.72	6,089.4	233.6	-244.3	-233.6	0.00	0.00	
6,200.0	3.64	313.72	6,189.2	238.0	-248.9	-238.0	0.00	0.00	
6,300.0	3.64	313.72	6,289.0	242.4	-253.5	-242.4	0.00	0.00	
6,400.0	3.64	313.72	6,388.8	246.8	-258.1	-246.8	0.00	0.00	
6,500.0	3.64	313.72	6,488.6	251.2	-262.7	-251.2	0.00	0.00	
6,579.6	3.64	313.72	6,568.0	254.7	-266.3	-254.7	0.00	0.00	Start build/turn @ 6579' MD
6,600.0	2.64	280.48	6,588.4	255.2	-267.3	-255.2	10.00	-4.91	
6,700.0	9.82	194.16	6,687.8	247.3	-271.6	-247.3	10.00	7.17	
6,800.0	19.64	186.29	6,784.4	222.3	-275.6	-222.3	10.00	9.82	
6,900.0	29.58	183.57	6,875.2	180.9	-279.0	-180.9	10.00	9.94	
7,000.0	39.54	182.14	6,957.5	124.3	-281.7	-124.3	10.00	9.97	
7,095.9	49.11	181.25	7,026.0	57.4	-283.6	-57.4	10.00	9.98	Sharon Springs
7,100.0	49.52	181.21	7,028.7	54.3	-283.7	-54.3	10.00	9.98	
7,200.0	59.51	180.53	7,086.7	-27.1	-284.9	27.1	10.00	9.98	
7,266.5	66.15	180.15	7,117.0	-86.1	-285.2	86.1	10.00	9.99	Niobrara
7,300.0	69.50	179.97	7,129.7	-117.2	-285.3	117.2	10.00	9.99	
7,398.0	79.29	179.49	7,156.0	-211.5	-284.8	211.5	10.00	9.99	B Chalk
7,400.0	79.48	179.48	7,156.4	-213.4	-284.8	213.4	10.00	9.99	
7,500.0	89.47	179.02	7,166.0	-312.8	-283.5	312.8	10.00	9.99	
7,505.3	90.00	179.00	7,166.0	-318.1	-283.4	318.1	9.93	9.92	LP @ 7166' TVD; 90° - 7"
7,600.0	90.00	179.00	7,166.0	-412.8	-281.8	412.8	0.00	0.00	
7,700.0	90.00	179.00	7,166.0	-512.8	-280.0	512.8	0.00	0.00	
7,800.0	90.00	179.00	7,166.0	-612.8	-278.3	612.8	0.00	0.00	
7,900.0	90.00	179.00	7,166.0	-712.8	-276.5	712.8	0.00	0.00	
8,000.0	90.00	179.00	7,166.0	-812.8	-274.8	812.8	0.00	0.00	
8,100.0	90.00	179.00	7,166.0	-912.7	-273.0	912.7	0.00	0.00	
8,200.0	90.00	179.00	7,166.0	-1,012.7	-271.3	1,012.7	0.00	0.00	
8,300.0	90.00	179.00	7,166.0	-1,112.7	-269.5	1,112.7	0.00	0.00	
8,400.0	90.00	179.00	7,166.0	-1,212.7	-267.8	1,212.7	0.00	0.00	
8,500.0	90.00	179.00	7,166.0	-1,312.7	-266.0	1,312.7	0.00	0.00	
8,600.0	90.00	179.00	7,166.0	-1,412.7	-264.3	1,412.7	0.00	0.00	
8,700.0	90.00	179.00	7,166.0	-1,512.7	-262.6	1,512.7	0.00	0.00	
8,800.0	90.00	179.00	7,166.0	-1,612.6	-260.8	1,612.6	0.00	0.00	
8,900.0	90.00	179.00	7,166.0	-1,712.6	-259.1	1,712.6	0.00	0.00	
9,000.0	90.00	179.00	7,166.0	-1,812.6	-257.3	1,812.6	0.00	0.00	
9,100.0	90.00	179.00	7,166.0	-1,912.6	-255.6	1,912.6	0.00	0.00	
9,200.0	90.00	179.00	7,166.0	-2,012.6	-253.8	2,012.6	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2G-5H-F267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,300.0	90.00	179.00	7,166.0	-2,112.6	-252.1	2,112.6	0.00	0.00	
9,400.0	90.00	179.00	7,166.0	-2,212.5	-250.3	2,212.5	0.00	0.00	
9,500.0	90.00	179.00	7,166.0	-2,312.5	-248.6	2,312.5	0.00	0.00	
9,600.0	90.00	179.00	7,166.0	-2,412.5	-246.8	2,412.5	0.00	0.00	
9,700.0	90.00	179.00	7,166.0	-2,512.5	-245.1	2,512.5	0.00	0.00	
9,800.0	90.00	179.00	7,166.0	-2,612.5	-243.4	2,612.5	0.00	0.00	
9,900.0	90.00	179.00	7,166.0	-2,712.5	-241.6	2,712.5	0.00	0.00	
10,000.0	90.00	179.00	7,166.0	-2,812.5	-239.9	2,812.5	0.00	0.00	
10,100.0	90.00	179.00	7,166.0	-2,912.4	-238.1	2,912.4	0.00	0.00	
10,200.0	90.00	179.00	7,166.0	-3,012.4	-236.4	3,012.4	0.00	0.00	
10,300.0	90.00	179.00	7,166.0	-3,112.4	-234.6	3,112.4	0.00	0.00	
10,400.0	90.00	179.00	7,166.0	-3,212.4	-232.9	3,212.4	0.00	0.00	
10,500.0	90.00	179.00	7,166.0	-3,312.4	-231.1	3,312.4	0.00	0.00	
10,565.3	90.00	179.00	7,166.0	-3,377.6	-230.0	3,377.6	0.00	0.00	Start Turn 1.00 - Interp @ 7166.0 (Vogl-McCoy
10,600.0	90.00	179.35	7,166.0	-3,412.4	-229.5	3,412.4	1.00	0.00	
10,700.0	90.00	180.35	7,166.0	-3,512.4	-229.2	3,512.4	1.00	0.00	
10,765.3	90.00	181.00	7,166.0	-3,577.6	-230.0	3,577.6	1.00	0.00	
10,800.0	90.00	181.35	7,166.0	-3,612.4	-230.7	3,612.4	1.00	0.00	
10,900.0	90.00	182.35	7,166.0	-3,712.3	-233.9	3,712.3	1.00	0.00	
10,901.6	90.00	182.36	7,166.0	-3,713.9	-234.0	3,713.9	1.00	0.00	End of turn @ 10,901' MD
11,000.0	90.00	182.36	7,166.0	-3,812.2	-238.1	3,812.2	0.00	0.00	
11,100.0	90.00	182.36	7,166.0	-3,912.1	-242.2	3,912.1	0.00	0.00	
11,200.0	90.00	182.36	7,166.0	-4,012.0	-246.3	4,012.0	0.00	0.00	
11,300.0	90.00	182.36	7,166.0	-4,112.0	-250.4	4,112.0	0.00	0.00	
11,400.0	90.00	182.36	7,166.0	-4,211.9	-254.6	4,211.9	0.00	0.00	
11,500.0	90.00	182.36	7,166.0	-4,311.8	-258.7	4,311.8	0.00	0.00	
11,600.0	90.00	182.36	7,166.0	-4,411.7	-262.8	4,411.7	0.00	0.00	
11,700.0	90.00	182.36	7,166.0	-4,511.6	-266.9	4,511.6	0.00	0.00	
11,800.0	90.00	182.36	7,166.0	-4,611.5	-271.0	4,611.5	0.00	0.00	
11,900.0	90.00	182.36	7,166.0	-4,711.4	-275.2	4,711.4	0.00	0.00	
12,000.0	90.00	182.36	7,166.0	-4,811.4	-279.3	4,811.4	0.00	0.00	
12,100.0	90.00	182.36	7,166.0	-4,911.3	-283.4	4,911.3	0.00	0.00	
12,200.0	90.00	182.36	7,166.0	-5,011.2	-287.5	5,011.2	0.00	0.00	
12,300.0	90.00	182.36	7,166.0	-5,111.1	-291.7	5,111.1	0.00	0.00	
12,400.0	90.00	182.36	7,166.0	-5,211.0	-295.8	5,211.0	0.00	0.00	
12,500.0	90.00	182.36	7,166.0	-5,310.9	-299.9	5,310.9	0.00	0.00	
12,600.0	90.00	182.36	7,166.0	-5,410.9	-304.0	5,410.9	0.00	0.00	
12,700.0	90.00	182.36	7,166.0	-5,510.8	-308.2	5,510.8	0.00	0.00	
12,800.0	90.00	182.36	7,166.0	-5,610.7	-312.3	5,610.7	0.00	0.00	
12,900.0	90.00	182.36	7,166.0	-5,710.6	-316.4	5,710.6	0.00	0.00	
13,000.0	90.00	182.36	7,166.0	-5,810.5	-320.5	5,810.5	0.00	0.00	
13,100.0	90.00	182.36	7,166.0	-5,910.4	-324.7	5,910.4	0.00	0.00	
13,200.0	90.00	182.36	7,166.0	-6,010.3	-328.8	6,010.3	0.00	0.00	
13,300.0	90.00	182.36	7,166.0	-6,110.3	-332.9	6,110.3	0.00	0.00	
13,400.0	90.00	182.36	7,166.0	-6,210.2	-337.0	6,210.2	0.00	0.00	
13,500.0	90.00	182.36	7,166.0	-6,310.1	-341.2	6,310.1	0.00	0.00	
13,600.0	90.00	182.36	7,166.0	-6,410.0	-345.3	6,410.0	0.00	0.00	
13,700.0	90.00	182.36	7,166.0	-6,509.9	-349.4	6,509.9	0.00	0.00	
13,800.0	90.00	182.36	7,166.0	-6,609.8	-353.5	6,609.8	0.00	0.00	
13,900.0	90.00	182.36	7,166.0	-6,709.7	-357.6	6,709.7	0.00	0.00	
14,000.0	90.00	182.36	7,166.0	-6,809.7	-361.8	6,809.7	0.00	0.00	
14,100.0	90.00	182.36	7,166.0	-6,909.6	-365.9	6,909.6	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2G-5H-F267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
14,200.0	90.00	182.36	7,166.0	-7,009.5	-370.0	7,009.5	0.00	0.00	
14,300.0	90.00	182.36	7,166.0	-7,109.4	-374.1	7,109.4	0.00	0.00	
14,400.0	90.00	182.36	7,166.0	-7,209.3	-378.3	7,209.3	0.00	0.00	
14,500.0	90.00	182.36	7,166.0	-7,309.2	-382.4	7,309.2	0.00	0.00	
14,600.0	90.00	182.36	7,166.0	-7,409.2	-386.5	7,409.2	0.00	0.00	
14,700.0	90.00	182.36	7,166.0	-7,509.1	-390.6	7,509.1	0.00	0.00	
14,800.0	90.00	182.36	7,166.0	-7,609.0	-394.8	7,609.0	0.00	0.00	
14,900.0	90.00	182.36	7,166.0	-7,708.9	-398.9	7,708.9	0.00	0.00	
14,921.1	90.00	182.36	7,166.0	-7,730.0	-399.8	7,730.0	0.00	0.00	TD at 14921.1 - Vogl-McCoy 2G-5H-F267 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
Interp @ 7166.0 (Vogl-M - plan hits target center - Point	0.00	0.00	7,166.0	-3,377.6	-230.0	1,301,248.29	3,163,288.87	40.158838	-104.915803
Vogl-McCoy 2G-5H-F26 - plan hits target center - Point	0.00	0.00	7,166.0	-7,730.0	-399.8	1,296,894.89	3,163,147.83	40.146890	-104.916410

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
7,505.3	7,166.0	7"	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
289.0	289.0	Fox Hills - BASE			
4,182.8	4,176.0	Sussex			
4,467.3	4,460.0	Sussex Marker			
4,759.9	4,752.0	Shannon			
6,010.4	6,000.0	Teepee Buttes (*if present)			
7,095.9	7,026.0	Sharon Springs			
7,266.5	7,117.0	Niobrara			
7,398.0	7,156.0	B Chalk			

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2G-5H-F267	**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
600.0	600.0	0.0	0.0	KOP @ 600'
964.4	964.2	8.0	-8.4	EOB; Inc=3.64°
6,579.6	6,568.0	254.7	-266.3	Start build/turn @ 6579' MD
7,505.3	7,166.0	-318.1	-283.4	LP @ 7166' TVD; 90°
10,565.3	7,166.0	-3,377.6	-230.0	Start Turn 1.00
10,901.6	7,166.0	-3,713.9	-234.0	End of turn @ 10,901' MD
14,921.1	7,166.0	-7,730.0	-399.8	TD at 14921.1

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S5-T2N-R67W (Vogl-McCoy)
Vogl-McCoy 2G-5H-F267
Hz
Plan #1

Anticollision Report

10 May, 2013

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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** 5/10/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	14,921.1	Plan #1 (Hz)	MWD	Geolink MWD

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S5-T2N-R67W (Vogl-McCoy)						
ALFRED SATER UNIT 2 (EXISTING) - KMG WELL - NO						Out of range
CHENG 3-8A (EXISTING) - KMG WELL - SURVEYS	10,583.2	7,373.7	159.6	77.2	1.937	CC, ES, SF
DIER 13-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 14-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS	13,256.8	7,283.3	138.5	17.6	1.146	Level 2, CC, ES, SF
DIER 24-8 (EXISTING) - ENCANA WELL - SURVEYS	14,786.2	7,369.2	142.2	-7.3	0.951	Level 1, CC, ES, SF
DIER 4-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
MCCOY #1 (EXISTING) - ENCANA WELL - NO SURVEY						Out of range
MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 13-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
PROMINENCE 4-8 (EXISTING) - KMG WELL - NO SUR						Out of range
VOGL 5-8A (EXISTING) - KMG WELL - NO SURVEYS						Out of range
Vogl-Geist 2A-5H-E267 - Hz - Plan #1						Out of range
Vogl-Geist 2B-5H-E267 - Hz - Plan #1						Out of range
Vogl-Geist 2C-5H-E267 - Hz - Plan #1						Out of range
Vogl-Geist 2D-5H-F267 - Hz - Plan #1	266.3	267.3	30.7	29.9	37.186	CC
Vogl-Geist 2D-5H-F267 - Hz - Plan #1	300.0	301.0	30.7	29.8	32.557	ES
Vogl-Geist 2D-5H-F267 - Hz - Plan #1	800.0	797.3	49.7	47.0	18.481	SF
Vogl-Geist 2E-5H-F267 - Hz - Plan #1	466.3	467.3	11.2	9.7	7.331	CC
Vogl-Geist 2E-5H-F267 - Hz - Plan #1	500.0	501.0	11.2	9.5	6.806	ES
Vogl-Geist 2E-5H-F267 - Hz - Plan #1	7,300.0	7,173.5	141.6	116.1	5.556	SF
Vogl-Geist 2F-5H-F267 - Hz - Plan #1	600.0	600.0	8.4	6.4	4.214	CC, ES
Vogl-Geist 2F-5H-F267 - Hz - Plan #1	700.0	700.0	9.0	6.7	3.863	SF
Vogl-McCoy 2A-5H-E267 - Hz - Plan #1						Out of range
Vogl-McCoy 2B-5H-E267 - Hz - Plan #1						Out of range
Vogl-McCoy 2C-5H-E267 - Hz - Plan #1						Out of range
Vogl-McCoy 2D-5H-E267 - Hz - Plan #1						Out of range
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	166.3	167.3	41.9	41.4	87.766	CC
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	200.0	201.0	41.9	41.3	70.435	ES
Vogl-McCoy 2E-5H-F267 - Hz - Plan #1	5,400.0	5,371.5	499.0	479.0	24.915	SF
Vogl-McCoy 2F-5H-F267 - Hz - Plan #1	366.3	367.3	22.4	21.2	19.015	CC
Vogl-McCoy 2F-5H-F267 - Hz - Plan #1	400.0	401.0	22.4	21.1	17.287	ES
Vogl-McCoy 2F-5H-F267 - Hz - Plan #1	14,921.1	15,129.8	393.5	160.8	1.691	SF
Vogl-McCoy 2H-5H-F267 - Hz - Plan #1	600.0	600.0	19.6	17.6	9.832	CC, ES
Vogl-McCoy 2H-5H-F267 - Hz - Plan #1	14,921.1	15,122.8	394.3	162.0	1.697	SF
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 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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) - CHENG 3-8A (EXISTING) - KMG WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 783-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,200.0	7,166.0	7,378.0	7,178.9	56.0	21.5	92.48	-3,397.6	-389.4	414.5	338.7	75.75	5.472	
10,300.0	7,166.0	7,376.9	7,177.8	57.7	21.5	92.08	-3,397.6	-389.4	324.5	247.0	77.47	4.189	
10,400.0	7,166.0	7,375.8	7,176.7	59.4	21.5	91.69	-3,397.6	-389.4	242.5	163.3	79.20	3.062	
10,500.0	7,166.0	7,374.6	7,175.6	61.2	21.5	91.29	-3,397.6	-389.4	179.8	98.9	80.92	2.222	
10,583.2	7,166.0	7,373.7	7,174.7	62.6	21.5	90.96	-3,397.6	-389.5	159.6	77.2	82.42	1.937	CC, ES, SF
10,600.0	7,166.0	7,373.5	7,174.5	62.9	21.5	90.89	-3,397.6	-389.5	160.7	77.9	82.72	1.942	
10,700.0	7,166.0	7,372.4	7,173.3	64.6	21.5	90.47	-3,397.6	-389.5	197.1	112.5	84.61	2.329	
10,800.0	7,166.0	7,371.2	7,172.1	66.3	21.5	90.05	-3,397.6	-389.5	267.1	180.6	86.49	3.088	
10,900.0	7,166.0	7,370.0	7,170.9	68.0	21.5	89.64	-3,397.6	-389.5	351.0	262.7	88.34	3.974	
11,000.0	7,166.0	7,368.8	7,169.7	69.8	21.5	89.22	-3,397.7	-389.5	441.4	351.3	90.06	4.901	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 23-8 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 738-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
12,800.0	7,166.0	7,224.7	7,158.8	101.0	14.0	77.84	-6,053.8	-478.0	474.2	361.9	112.22	4.225	
12,900.0	7,166.0	7,239.7	7,173.4	102.7	14.1	83.23	-6,055.9	-475.1	380.4	264.8	115.64	3.289	
13,000.0	7,166.0	7,253.2	7,186.5	104.5	14.1	88.39	-6,057.7	-472.6	290.2	172.1	118.14	2.456	
13,100.0	7,166.0	7,265.3	7,198.3	106.2	14.1	93.18	-6,059.2	-470.4	208.4	88.6	119.80	1.740	
13,200.0	7,166.0	7,276.9	7,209.6	108.0	14.2	97.90	-6,060.7	-468.3	149.5	28.8	120.68	1.239	Level 2
13,256.8	7,166.0	7,283.3	7,215.8	109.0	14.2	100.55	-6,061.5	-467.1	138.5	17.6	120.84	1.146	Level 2, CC, ES, SF
13,300.0	7,166.0	7,288.2	7,220.6	109.7	14.2	102.54	-6,062.1	-466.3	145.0	24.2	120.79	1.200	Level 2
13,400.0	7,166.0	7,300.1	7,232.2	111.5	14.2	107.42	-6,063.6	-464.2	198.5	78.5	119.97	1.655	
13,500.0	7,166.0	7,313.0	7,244.8	113.2	14.3	112.56	-6,065.3	-462.0	278.4	160.3	118.05	2.358	
13,600.0	7,166.0	7,325.2	7,256.8	114.9	14.3	117.25	-6,066.9	-459.9	367.8	252.2	115.58	3.182	
13,700.0	7,166.0	7,335.9	7,267.2	116.7	14.4	121.17	-6,068.3	-458.2	461.2	348.1	113.12	4.077	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 24-8 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 740-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,300.0	7,166.0	7,243.9	7,119.8	127.2	17.5	60.52	-7,559.3	-557.7	494.8	369.4	125.35	3.947	
14,400.0	7,166.0	7,278.1	7,152.0	128.9	17.6	68.85	-7,568.4	-550.9	403.0	267.5	135.49	2.975	
14,500.0	7,166.0	7,305.7	7,178.2	130.7	17.8	77.09	-7,575.3	-545.4	314.0	170.9	143.09	2.194	
14,600.0	7,166.0	7,330.2	7,201.6	132.4	17.9	85.56	-7,581.1	-540.8	231.3	83.2	148.06	1.562	
14,700.0	7,166.0	7,352.1	7,222.5	134.2	18.0	93.81	-7,585.9	-536.9	165.5	15.4	150.05	1.103	Level 2
14,786.2	7,166.0	7,369.2	7,239.0	135.7	18.1	100.53	-7,589.5	-533.9	142.2	-7.3	149.56	0.951	Level 1, CC, ES, SF
14,800.0	7,166.0	7,371.7	7,241.5	135.9	18.1	101.54	-7,590.0	-533.5	142.9	-6.4	149.32	0.957	Level 1
14,900.0	7,166.0	7,389.1	7,258.3	137.7	18.2	108.36	-7,593.4	-530.6	180.9	34.3	146.66	1.234	Level 2
14,921.1	7,166.0	7,392.5	7,261.6	138.0	18.2	109.68	-7,594.0	-530.0	194.5	48.5	145.94	1.332	Level 3

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 2D-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
0.0	0.0	1.0	1.0	0.0	0.0	-89.95	0.0	-30.7	30.7				
100.0	100.0	101.0	101.0	0.1	0.1	-89.95	0.0	-30.7	30.7	30.5	0.25	124.917	
200.0	200.0	201.0	201.0	0.3	0.3	-89.95	0.0	-30.7	30.7	30.1	0.60	51.652	
266.3	266.3	267.3	267.3	0.4	0.4	-89.95	0.0	-30.7	30.7	29.9	0.83	37.186	CC
300.0	300.0	301.0	301.0	0.5	0.5	-89.95	0.0	-30.7	30.7	29.8	0.94	32.557	ES
400.0	400.0	400.5	400.5	0.6	0.6	-90.49	-0.3	-31.6	31.6	30.3	1.29	24.421	
500.0	500.0	500.0	500.0	0.8	0.8	-91.94	-1.2	-34.0	34.1	32.4	1.64	20.710	
600.0	600.0	599.2	599.1	1.0	1.0	-93.92	-2.6	-38.1	38.2	36.2	2.00	19.104	
700.0	700.0	698.4	698.0	1.2	1.2	-50.61	-4.6	-43.8	43.6	41.2	2.34	18.630	
800.0	800.0	797.3	796.7	1.3	1.4	-54.86	-7.3	-51.0	49.7	47.0	2.69	18.481	SF
900.0	899.9	896.0	895.0	1.5	1.6	-59.78	-10.4	-59.9	56.8	53.8	3.04	18.692	
1,000.0	999.7	994.5	992.8	1.7	1.9	-64.85	-14.2	-70.3	65.3	61.9	3.40	19.216	
1,100.0	1,099.5	1,093.6	1,091.1	1.9	2.1	-68.95	-18.3	-81.9	75.3	71.5	3.76	19.997	
1,200.0	1,199.3	1,192.9	1,189.7	2.1	2.4	-72.09	-22.5	-93.7	85.6	81.5	4.14	20.688	
1,300.0	1,299.1	1,292.3	1,288.3	2.3	2.7	-74.55	-26.8	-105.4	96.2	91.7	4.52	21.282	
1,400.0	1,398.9	1,391.7	1,386.8	2.5	2.9	-76.52	-31.0	-117.1	106.9	102.0	4.90	21.792	
1,500.0	1,498.7	1,491.0	1,485.4	2.7	3.2	-78.13	-35.2	-128.9	117.7	112.4	5.29	22.231	
1,600.0	1,598.5	1,590.4	1,584.0	2.9	3.5	-79.47	-39.4	-140.6	128.5	122.9	5.68	22.610	
1,700.0	1,698.3	1,689.8	1,682.6	3.1	3.7	-80.60	-43.6	-152.3	139.5	133.4	6.08	22.941	
1,800.0	1,798.1	1,789.1	1,781.2	3.3	4.0	-81.56	-47.8	-164.0	150.4	144.0	6.48	23.231	
1,900.0	1,897.9	1,888.5	1,879.7	3.5	4.3	-82.40	-52.0	-175.8	161.4	154.6	6.87	23.486	
2,000.0	1,997.7	1,987.9	1,978.3	3.7	4.6	-83.12	-56.2	-187.5	172.5	165.2	7.27	23.713	
2,100.0	2,097.5	2,087.2	2,076.9	3.9	4.8	-83.76	-60.4	-199.2	183.6	175.9	7.68	23.915	
2,200.0	2,197.3	2,186.6	2,175.5	4.1	5.1	-84.33	-64.6	-211.0	194.6	186.6	8.08	24.097	
2,300.0	2,297.1	2,286.0	2,274.1	4.3	5.4	-84.84	-68.8	-222.7	205.7	197.3	8.48	24.260	
2,400.0	2,396.9	2,385.3	2,372.7	4.5	5.7	-85.29	-73.0	-234.4	216.8	208.0	8.88	24.408	
2,500.0	2,496.6	2,484.7	2,471.2	4.7	5.9	-85.70	-77.2	-246.1	228.0	218.7	9.29	24.543	
2,600.0	2,596.4	2,584.1	2,569.8	4.9	6.2	-86.07	-81.4	-257.9	239.1	229.4	9.69	24.666	
2,700.0	2,696.2	2,683.4	2,668.4	5.1	6.5	-86.41	-85.6	-269.6	250.3	240.2	10.10	24.779	
2,800.0	2,796.0	2,782.8	2,767.0	5.4	6.8	-86.72	-89.8	-281.3	261.4	250.9	10.51	24.882	
2,900.0	2,895.8	2,882.2	2,865.6	5.6	7.1	-87.01	-94.1	-293.0	272.6	261.7	10.91	24.978	
3,000.0	2,995.6	2,981.5	2,964.2	5.8	7.3	-87.27	-98.3	-304.8	283.7	272.4	11.32	25.066	
3,100.0	3,095.4	3,080.9	3,062.7	6.0	7.6	-87.51	-102.5	-316.5	294.9	283.2	11.73	25.148	
3,200.0	3,195.2	3,180.3	3,161.3	6.2	7.9	-87.73	-106.7	-328.2	306.1	294.0	12.13	25.225	
3,300.0	3,295.0	3,279.6	3,259.9	6.4	8.2	-87.94	-110.9	-340.0	317.3	304.7	12.54	25.296	
3,400.0	3,394.8	3,379.0	3,358.5	6.6	8.4	-88.14	-115.1	-351.7	328.5	315.5	12.95	25.362	
3,500.0	3,494.6	3,478.4	3,457.1	6.8	8.7	-88.32	-119.3	-363.4	339.6	326.3	13.36	25.425	
3,600.0	3,594.4	3,577.7	3,555.6	7.0	9.0	-88.49	-123.5	-375.1	350.8	337.1	13.77	25.483	
3,700.0	3,694.2	3,677.1	3,654.2	7.2	9.3	-88.65	-127.7	-386.9	362.0	347.9	14.18	25.538	
3,800.0	3,794.0	3,776.5	3,752.8	7.4	9.6	-88.80	-131.9	-398.6	373.2	358.7	14.59	25.590	
3,900.0	3,893.8	3,875.8	3,851.4	7.6	9.8	-88.94	-136.1	-410.3	384.4	369.4	14.99	25.638	
4,000.0	3,993.6	3,975.2	3,950.0	7.8	10.1	-89.07	-140.3	-422.0	395.6	380.2	15.40	25.685	
4,100.0	4,093.4	4,074.6	4,048.6	8.0	10.4	-89.20	-144.5	-433.8	406.8	391.0	15.81	25.728	
4,200.0	4,193.2	4,173.9	4,147.1	8.2	10.7	-89.32	-148.7	-445.5	418.0	401.8	16.22	25.769	
4,300.0	4,293.0	4,273.3	4,245.7	8.4	11.0	-89.43	-152.9	-457.2	429.3	412.6	16.63	25.809	
4,400.0	4,392.8	4,372.7	4,344.3	8.6	11.2	-89.54	-157.1	-469.0	440.5	423.4	17.04	25.846	
4,500.0	4,492.6	4,472.0	4,442.9	8.9	11.5	-89.64	-161.4	-480.7	451.7	434.2	17.45	25.881	
4,600.0	4,592.4	4,571.4	4,541.5	9.1	11.8	-89.74	-165.6	-492.4	462.9	445.0	17.86	25.915	
4,700.0	4,692.2	4,670.8	4,640.1	9.3	12.1	-89.83	-169.8	-504.1	474.1	455.8	18.27	25.947	
4,800.0	4,792.0	4,770.1	4,738.6	9.5	12.3	-89.92	-174.0	-515.9	485.3	466.6	18.68	25.978	
4,900.0	4,891.8	4,869.5	4,837.2	9.7	12.6	-90.00	-178.2	-527.6	496.5	477.4	19.09	26.008	

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 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 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
0.0	0.0	1.0	1.0	0.0	0.0	-89.96	0.0	-11.2	11.2				
100.0	100.0	101.0	101.0	0.1	0.1	-89.96	0.0	-11.2	11.2	10.9	0.25	45.424	
200.0	200.0	201.0	201.0	0.3	0.3	-89.96	0.0	-11.2	11.2	10.6	0.60	18.782	
300.0	300.0	301.0	301.0	0.5	0.5	-89.96	0.0	-11.2	11.2	10.2	0.94	11.839	
400.0	400.0	401.0	401.0	0.6	0.6	-89.96	0.0	-11.2	11.2	9.9	1.29	8.643	
466.3	466.3	467.3	467.3	0.8	0.8	-89.96	0.0	-11.2	11.2	9.7	1.52	7.331	CC
500.0	500.0	501.0	501.0	0.8	0.8	-89.96	0.0	-11.2	11.2	9.5	1.64	6.806	ES
600.0	600.0	600.8	600.8	1.0	1.0	-92.26	-0.5	-11.9	11.9	9.9	1.99	5.993	
700.0	700.0	700.6	700.5	1.2	1.2	-54.14	-1.9	-14.1	13.7	11.4	2.34	5.870	
800.0	800.0	800.2	800.1	1.3	1.4	-67.15	-4.2	-17.8	16.7	14.0	2.69	6.199	
900.0	899.9	899.7	899.4	1.5	1.5	-80.42	-7.5	-22.9	21.6	18.6	3.05	7.090	
1,000.0	999.7	999.2	998.5	1.7	1.7	-91.15	-11.6	-29.2	28.7	25.2	3.41	8.394	
1,100.0	1,099.5	1,098.8	1,097.9	1.9	2.0	-98.03	-15.7	-35.7	36.5	32.7	3.79	9.640	
1,200.0	1,199.3	1,198.4	1,197.2	2.1	2.2	-102.43	-19.9	-42.2	44.7	40.5	4.17	10.730	
1,300.0	1,299.1	1,298.0	1,296.5	2.3	2.4	-105.46	-24.0	-48.6	53.1	48.5	4.55	11.670	
1,400.0	1,398.9	1,397.6	1,395.8	2.5	2.6	-107.66	-28.1	-55.1	61.5	56.6	4.93	12.480	
1,500.0	1,498.7	1,497.2	1,495.1	2.7	2.8	-109.33	-32.3	-61.6	70.1	64.8	5.32	13.182	
1,600.0	1,598.5	1,596.9	1,594.5	2.9	3.0	-110.63	-36.4	-68.0	78.7	73.0	5.70	13.792	
1,700.0	1,698.3	1,696.5	1,693.8	3.1	3.2	-111.68	-40.6	-74.5	87.3	81.2	6.09	14.328	
1,800.0	1,798.1	1,796.1	1,793.1	3.3	3.4	-112.54	-44.7	-81.0	95.9	89.5	6.48	14.801	
1,900.0	1,897.9	1,895.7	1,892.4	3.5	3.6	-113.25	-48.9	-87.4	104.6	97.7	6.87	15.221	
2,000.0	1,997.7	1,995.3	1,991.7	3.7	3.9	-113.86	-53.0	-93.9	113.3	106.0	7.26	15.596	
2,100.0	2,097.5	2,094.9	2,091.1	3.9	4.1	-114.38	-57.2	-100.4	122.0	114.3	7.65	15.934	
2,200.0	2,197.3	2,194.6	2,190.4	4.1	4.3	-114.83	-61.3	-106.8	130.7	122.6	8.05	16.238	
2,300.0	2,297.1	2,294.2	2,289.7	4.3	4.5	-115.23	-65.5	-113.3	139.4	130.9	8.44	16.515	
2,400.0	2,396.9	2,393.8	2,389.0	4.5	4.7	-115.57	-69.6	-119.8	148.1	139.3	8.83	16.767	
2,500.0	2,496.6	2,493.4	2,488.3	4.7	5.0	-115.88	-73.7	-126.2	156.8	147.6	9.23	16.997	
2,600.0	2,596.4	2,593.0	2,587.7	4.9	5.2	-116.16	-77.9	-132.7	165.5	155.9	9.62	17.208	
2,700.0	2,696.2	2,692.6	2,687.0	5.1	5.4	-116.41	-82.0	-139.2	174.2	164.2	10.01	17.403	
2,800.0	2,796.0	2,792.2	2,786.3	5.4	5.6	-116.64	-86.2	-145.6	183.0	172.6	10.41	17.583	
2,900.0	2,895.8	2,891.9	2,885.6	5.6	5.8	-116.84	-90.3	-152.1	191.7	180.9	10.80	17.750	
3,000.0	2,995.6	2,991.5	2,984.9	5.8	6.0	-117.03	-94.5	-158.6	200.4	189.2	11.19	17.905	
3,100.0	3,095.4	3,091.1	3,084.3	6.0	6.3	-117.20	-98.6	-165.0	209.2	197.6	11.59	18.049	
3,200.0	3,195.2	3,190.7	3,183.6	6.2	6.5	-117.36	-102.8	-171.5	217.9	205.9	11.98	18.184	
3,300.0	3,295.0	3,290.3	3,282.9	6.4	6.7	-117.50	-106.9	-178.0	226.6	214.3	12.38	18.310	
3,400.0	3,394.8	3,389.9	3,382.2	6.6	6.9	-117.64	-111.0	-184.4	235.4	222.6	12.77	18.429	
3,500.0	3,494.6	3,489.6	3,481.5	6.8	7.1	-117.76	-115.2	-190.9	244.1	230.9	13.17	18.540	
3,600.0	3,594.4	3,589.2	3,580.9	7.0	7.4	-117.88	-119.3	-197.4	252.8	239.3	13.56	18.644	
3,700.0	3,694.2	3,688.8	3,680.2	7.2	7.6	-117.99	-123.5	-203.8	261.6	247.6	13.96	18.743	
3,800.0	3,794.0	3,788.4	3,779.5	7.4	7.8	-118.09	-127.6	-210.3	270.3	256.0	14.35	18.836	
3,900.0	3,893.8	3,888.0	3,878.8	7.6	8.0	-118.18	-131.8	-216.8	279.1	264.3	14.75	18.925	
4,000.0	3,993.6	3,987.6	3,978.1	7.8	8.2	-118.27	-135.9	-223.2	287.8	272.7	15.14	19.008	
4,100.0	4,093.4	4,087.3	4,077.5	8.0	8.4	-118.36	-140.1	-229.7	296.6	281.0	15.54	19.087	
4,200.0	4,193.2	4,186.9	4,176.8	8.2	8.7	-118.44	-144.2	-236.2	305.3	289.4	15.93	19.163	
4,300.0	4,293.0	4,286.5	4,276.1	8.4	8.9	-118.51	-148.4	-242.6	314.0	297.7	16.33	19.234	
4,400.0	4,392.8	4,386.1	4,375.4	8.6	9.1	-118.58	-152.5	-249.1	322.8	306.1	16.72	19.303	
4,500.0	4,492.6	4,485.7	4,474.7	8.9	9.3	-118.65	-156.6	-255.6	331.5	314.4	17.12	19.368	
4,600.0	4,592.4	4,585.3	4,574.1	9.1	9.5	-118.71	-160.8	-262.0	340.3	322.8	17.51	19.430	
4,700.0	4,692.2	4,685.0	4,673.4	9.3	9.8	-118.77	-164.9	-268.5	349.0	331.1	17.91	19.489	
4,800.0	4,792.0	4,784.6	4,772.7	9.5	10.0	-118.83	-169.1	-274.9	357.8	339.5	18.30	19.546	
4,900.0	4,891.8	4,884.2	4,872.0	9.7	10.2	-118.89	-173.2	-281.4	366.5	347.8	18.70	19.600	
5,000.0	4,991.6	4,983.8	4,971.3	9.9	10.4	-118.94	-177.4	-287.9	375.3	356.2	19.10	19.652	

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 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 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
5,100.0	5,091.4	5,083.4	5,070.7	10.1	10.6	-118.99	-181.5	-294.3	384.0	364.5	19.49	19.702	
5,200.0	5,191.2	5,183.0	5,170.0	10.3	10.9	-119.04	-185.7	-300.8	392.8	372.9	19.89	19.750	
5,300.0	5,291.0	5,282.7	5,269.3	10.5	11.1	-119.08	-189.8	-307.3	401.5	381.2	20.28	19.796	
5,400.0	5,390.8	5,382.3	5,368.6	10.7	11.3	-119.13	-193.9	-313.7	410.3	389.6	20.68	19.840	
5,500.0	5,490.6	5,481.9	5,467.9	10.9	11.5	-119.17	-198.1	-320.2	419.0	397.9	21.07	19.883	
5,600.0	5,590.4	5,581.5	5,567.2	11.1	11.7	-119.21	-202.2	-326.7	427.8	406.3	21.47	19.924	
5,700.0	5,690.2	5,681.1	5,666.6	11.3	12.0	-119.25	-206.4	-333.1	436.5	414.6	21.86	19.964	
5,800.0	5,790.0	5,780.7	5,765.9	11.5	12.2	-119.28	-210.5	-339.6	445.3	423.0	22.26	20.002	
5,900.0	5,889.8	5,880.3	5,865.2	11.7	12.4	-119.32	-214.7	-346.1	454.0	431.3	22.66	20.039	
6,000.0	5,989.6	5,980.0	5,964.5	11.9	12.6	-119.35	-218.8	-352.5	462.8	439.7	23.05	20.074	
6,100.0	6,089.4	6,079.6	6,063.8	12.2	12.8	-119.39	-223.0	-359.0	471.5	448.1	23.45	20.108	
6,200.0	6,189.2	6,179.2	6,163.2	12.4	13.0	-119.42	-227.1	-365.5	480.3	456.4	23.84	20.141	
6,300.0	6,289.0	6,278.8	6,262.5	12.6	13.3	-119.45	-231.3	-371.9	489.0	464.8	24.24	20.174	
6,400.0	6,388.8	6,378.4	6,361.8	12.8	13.5	-119.48	-235.4	-378.4	497.8	473.1	24.64	20.205	
6,800.0	6,784.4	6,886.2	6,867.5	13.3	14.5	11.32	-240.8	-411.2	489.5	464.2	25.29	19.353	
6,900.0	6,875.2	7,158.2	7,112.0	13.3	14.6	38.54	-128.4	-426.0	415.8	390.8	24.94	16.671	
7,000.0	6,957.5	7,220.0	7,158.3	13.3	14.6	73.83	-87.6	-428.7	326.2	301.3	24.90	13.103	
7,100.0	7,028.7	7,222.8	7,160.3	13.3	14.6	92.63	-85.7	-428.8	240.2	215.2	24.95	9.626	
7,200.0	7,086.7	7,203.4	7,146.3	13.5	14.6	95.33	-99.1	-428.0	170.6	145.5	25.09	6.799	
7,298.9	7,129.3	7,173.9	7,124.1	13.8	14.6	87.34	-118.6	-426.7	141.6	116.1	25.49	5.556	
7,300.0	7,129.7	7,173.5	7,123.9	13.9	14.6	87.21	-118.8	-426.7	141.6	116.1	25.49	5.556	SF
7,400.0	7,156.4	7,137.9	7,095.8	14.4	14.6	71.40	-140.7	-425.1	169.6	144.3	25.30	6.702	
7,500.0	7,166.0	7,100.0	7,064.6	15.1	14.6	53.64	-162.1	-423.3	229.7	205.8	23.83	9.637	
7,600.0	7,166.0	7,062.1	7,032.0	16.0	14.5	45.11	-181.3	-421.3	302.1	279.2	22.98	13.150	
7,700.0	7,166.0	7,032.3	7,005.5	17.1	14.5	39.72	-194.9	-419.7	382.9	360.4	22.53	16.996	
7,800.0	7,166.0	7,000.0	6,976.1	18.2	14.5	34.78	-208.1	-417.9	468.8	446.7	22.05	21.259	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 2F-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
0.0	0.0	0.0	0.0	0.0	0.0	90.06	0.0	8.4	8.4				
100.0	100.0	100.0	100.0	0.1	0.1	90.06	0.0	8.4	8.4	8.1	0.24	34.312	
200.0	200.0	200.0	200.0	0.3	0.3	90.06	0.0	8.4	8.4	7.8	0.59	14.128	
300.0	300.0	300.0	300.0	0.5	0.5	90.06	0.0	8.4	8.4	7.4	0.94	8.896	
400.0	400.0	400.0	400.0	0.6	0.6	90.06	0.0	8.4	8.4	7.1	1.29	6.491	
500.0	500.0	500.0	500.0	0.8	0.8	90.06	0.0	8.4	8.4	6.7	1.64	5.110	
600.0	600.0	600.0	600.0	1.0	1.0	90.06	0.0	8.4	8.4	6.4	1.99	4.214	CC, ES
700.0	700.0	700.0	700.0	1.2	1.2	140.16	0.0	8.4	9.0	6.7	2.34	3.863	SF
800.0	800.0	800.0	800.0	1.3	1.3	148.78	0.0	8.4	11.2	8.5	2.69	4.156	
900.0	899.9	899.9	899.9	1.5	1.5	157.39	0.0	8.4	15.1	12.0	3.04	4.964	
1,000.0	999.7	999.7	999.7	1.7	1.7	163.76	0.0	8.4	20.7	17.4	3.38	6.128	
1,100.0	1,099.5	1,099.5	1,099.5	1.9	1.9	167.55	0.0	8.4	26.9	23.2	3.73	7.206	
1,200.0	1,199.3	1,199.3	1,199.3	2.1	2.0	169.92	0.0	8.4	33.1	29.1	4.08	8.119	
1,300.0	1,299.1	1,299.1	1,299.1	2.3	2.2	171.54	0.0	8.4	39.4	35.0	4.43	8.896	
1,400.0	1,398.9	1,398.9	1,398.9	2.5	2.4	172.71	0.0	8.4	45.7	40.9	4.78	9.565	
1,500.0	1,498.7	1,498.7	1,498.7	2.7	2.6	173.60	0.0	8.4	52.0	46.9	5.13	10.146	
1,600.0	1,598.5	1,598.5	1,598.5	2.9	2.7	174.29	0.0	8.4	58.3	52.9	5.48	10.655	
1,700.0	1,698.3	1,698.3	1,698.3	3.1	2.9	174.85	0.0	8.4	64.7	58.8	5.82	11.104	
1,800.0	1,798.1	1,798.1	1,798.1	3.3	3.1	175.31	0.0	8.4	71.0	64.8	6.17	11.503	
1,900.0	1,897.9	1,897.9	1,897.9	3.5	3.3	175.70	0.0	8.4	77.3	70.8	6.52	11.860	
2,000.0	1,997.7	1,997.7	1,997.7	3.7	3.4	176.03	0.0	8.4	83.7	76.8	6.87	12.181	
2,100.0	2,097.5	2,097.5	2,097.5	3.9	3.6	176.31	0.0	8.4	90.0	82.8	7.22	12.471	
2,200.0	2,197.3	2,197.3	2,197.3	4.1	3.8	176.55	0.0	8.4	96.4	88.8	7.57	12.735	
2,300.0	2,297.1	2,297.1	2,297.1	4.3	4.0	176.76	0.0	8.4	102.7	94.8	7.91	12.976	
2,400.0	2,396.9	2,396.9	2,396.9	4.5	4.1	176.95	0.0	8.4	109.1	100.8	8.26	13.197	
2,500.0	2,496.6	2,496.6	2,496.6	4.7	4.3	177.12	0.0	8.4	115.4	106.8	8.61	13.400	
2,600.0	2,596.4	2,596.4	2,596.4	4.9	4.5	177.27	0.0	8.4	121.7	112.8	8.96	13.587	
2,700.0	2,696.2	2,696.2	2,696.2	5.1	4.7	177.40	0.0	8.4	128.1	118.8	9.31	13.761	
2,800.0	2,796.0	2,796.0	2,796.0	5.4	4.8	177.53	0.0	8.4	134.4	124.8	9.66	13.922	
2,900.0	2,895.8	2,895.8	2,895.8	5.6	5.0	177.64	0.0	8.4	140.8	130.8	10.01	14.071	
3,000.0	2,995.6	2,995.6	2,995.6	5.8	5.2	177.74	0.0	8.4	147.1	136.8	10.35	14.211	
3,100.0	3,095.4	3,095.4	3,095.4	6.0	5.4	177.83	0.0	8.4	153.5	142.8	10.70	14.342	
3,200.0	3,195.2	3,195.2	3,195.2	6.2	5.5	177.92	0.0	8.4	159.9	148.8	11.05	14.464	
3,300.0	3,295.0	3,295.0	3,295.0	6.4	5.7	178.00	0.0	8.4	166.2	154.8	11.40	14.579	
3,400.0	3,394.8	3,394.8	3,394.8	6.6	5.9	178.07	0.0	8.4	172.6	160.8	11.75	14.687	
3,500.0	3,494.6	3,494.6	3,494.6	6.8	6.0	178.14	0.0	8.4	178.9	166.8	12.10	14.789	
3,600.0	3,594.4	3,594.4	3,594.4	7.0	6.2	178.21	0.0	8.4	185.3	172.8	12.45	14.885	
3,700.0	3,694.2	3,694.2	3,694.2	7.2	6.4	178.27	0.0	8.4	191.6	178.8	12.79	14.977	
3,800.0	3,794.0	3,794.0	3,794.0	7.4	6.6	178.32	0.0	8.4	198.0	184.8	13.14	15.063	
3,900.0	3,893.8	3,893.8	3,893.8	7.6	6.7	178.37	0.0	8.4	204.3	190.8	13.49	15.145	
4,000.0	3,993.6	3,993.6	3,993.6	7.8	6.9	178.42	0.0	8.4	210.7	196.8	13.84	15.222	
4,100.0	4,093.4	4,090.3	4,090.3	8.0	7.1	178.55	-0.7	8.7	217.7	203.5	14.18	15.349	
4,200.0	4,193.2	4,186.6	4,186.5	8.2	7.3	178.84	-2.8	9.6	226.2	211.7	14.53	15.575	
4,300.0	4,293.0	4,282.5	4,282.4	8.4	7.4	179.27	-6.4	11.1	236.3	221.4	14.87	15.895	
4,400.0	4,392.8	4,378.1	4,377.8	8.6	7.6	179.81	-11.5	13.2	247.9	232.7	15.21	16.301	
4,500.0	4,492.6	4,473.3	4,472.8	8.9	7.8	-179.55	-18.0	15.9	261.0	245.5	15.55	16.788	
4,600.0	4,592.4	4,568.1	4,567.2	9.1	7.9	-178.85	-26.0	19.2	275.7	259.8	15.89	17.352	
4,700.0	4,692.2	4,662.4	4,660.9	9.3	8.1	-178.10	-35.3	23.1	292.0	275.7	16.23	17.988	
4,800.0	4,792.0	4,757.9	4,755.7	9.5	8.3	-177.33	-46.1	27.6	309.7	293.1	16.58	18.682	
4,900.0	4,891.8	4,856.2	4,853.2	9.7	8.5	-176.60	-57.4	32.4	327.7	310.8	16.92	19.362	
5,000.0	4,991.6	4,954.5	4,950.7	9.9	8.7	-175.94	-68.8	37.2	345.8	328.5	17.27	20.016	
5,100.0	5,091.4	5,052.7	5,048.2	10.1	8.9	-175.35	-80.2	41.9	363.9	346.3	17.62	20.646	

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 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 2F-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
5,200.0	5,191.2	5,151.0	5,145.7	10.3	9.1	-174.82	-91.5	46.7	382.0	364.1	17.98	21.254	
5,300.0	5,291.0	5,249.3	5,243.2	10.5	9.3	-174.33	-102.9	51.4	400.2	381.9	18.33	21.839	
5,400.0	5,390.8	5,347.6	5,340.7	10.7	9.6	-173.89	-114.3	56.2	418.4	399.7	18.68	22.404	
5,500.0	5,490.6	5,445.9	5,438.2	10.9	9.8	-173.48	-125.7	60.9	436.6	417.6	19.03	22.949	
5,600.0	5,590.4	5,544.1	5,535.7	11.1	10.0	-173.11	-137.0	65.7	454.9	435.5	19.38	23.475	
5,700.0	5,690.2	5,642.4	5,633.2	11.3	10.2	-172.77	-148.4	70.4	473.2	453.4	19.73	23.984	
5,800.0	5,790.0	5,740.7	5,730.7	11.5	10.4	-172.45	-159.8	75.2	491.4	471.4	20.08	24.475	
6,900.0	6,875.2	7,223.1	7,069.6	13.3	12.9	-95.30	89.3	136.9	468.1	443.0	25.06	18.680	
7,000.0	6,957.5	7,199.0	7,059.4	13.3	12.8	-94.52	67.6	136.6	434.3	409.4	24.92	17.430	
7,100.0	7,028.7	7,165.5	7,043.6	13.3	12.7	-90.90	38.0	136.1	420.4	395.6	24.85	16.918	
7,118.3	7,040.4	7,158.7	7,040.2	13.3	12.7	-89.97	32.1	136.0	420.1	395.2	24.86	16.895	
7,200.0	7,086.7	7,127.0	7,023.5	13.5	12.6	-85.08	5.2	135.5	426.3	401.4	24.90	17.121	
7,300.0	7,129.7	7,085.6	6,999.4	13.9	12.5	-77.77	-28.4	134.6	448.5	423.5	24.95	17.978	
7,400.0	7,156.4	7,042.4	6,971.7	14.4	12.5	-69.79	-61.5	133.6	481.9	457.1	24.79	19.436	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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
0.0	0.0	1.0	1.0	0.0	0.0	-89.95	0.0	-41.9	41.9				
100.0	100.0	101.0	101.0	0.1	0.1	-89.95	0.0	-41.9	41.9	41.7	0.25	170.341	
166.3	166.3	167.3	167.3	0.2	0.2	-89.95	0.0	-41.9	41.9	41.4	0.48	87.766	CC
200.0	200.0	201.0	201.0	0.3	0.3	-89.95	0.0	-41.9	41.9	41.3	0.60	70.435	ES
300.0	300.0	300.0	300.0	0.5	0.5	-89.62	0.3	-42.8	42.8	41.8	0.94	45.367	
400.0	400.0	399.5	399.5	0.6	0.7	-88.70	1.0	-45.2	45.3	44.0	1.29	35.040	
500.0	500.0	498.6	498.5	0.8	0.8	-87.39	2.3	-49.4	49.5	47.8	1.64	30.105	
600.0	600.0	597.6	597.2	1.0	1.0	-85.89	4.0	-55.1	55.4	53.4	2.00	27.708	
700.0	700.0	696.3	695.7	1.2	1.2	-38.54	6.2	-62.5	62.4	60.0	2.34	26.693	
800.0	800.0	794.9	793.9	1.3	1.5	-38.29	8.8	-71.5	69.6	67.0	2.69	25.927	
900.0	899.9	893.4	891.7	1.5	1.7	-38.63	12.0	-82.1	77.2	74.2	3.04	25.415	
1,000.0	999.7	991.7	989.2	1.7	2.0	-39.36	15.6	-94.3	85.2	81.9	3.40	25.093	
1,100.0	1,099.5	1,090.6	1,087.1	1.9	2.3	-39.94	19.7	-107.9	94.4	90.7	3.76	25.113	
1,200.0	1,199.3	1,190.2	1,185.5	2.1	2.6	-40.40	23.8	-121.8	103.8	99.7	4.13	25.154	
1,300.0	1,299.1	1,289.7	1,284.0	2.3	2.9	-40.78	27.9	-135.7	113.2	108.7	4.50	25.178	
1,400.0	1,398.9	1,389.3	1,382.5	2.5	3.2	-41.10	32.1	-149.7	122.6	117.7	4.87	25.191	
1,500.0	1,498.7	1,488.8	1,481.0	2.7	3.5	-41.37	36.2	-163.6	132.0	126.8	5.24	25.196	
1,600.0	1,598.5	1,588.4	1,579.5	2.9	3.8	-41.61	40.4	-177.5	141.4	135.8	5.61	25.195	
1,700.0	1,698.3	1,687.9	1,678.0	3.1	4.1	-41.82	44.5	-191.4	150.8	144.8	5.99	25.191	
1,800.0	1,798.1	1,787.5	1,776.5	3.3	4.4	-42.01	48.6	-205.3	160.2	153.8	6.36	25.185	
1,900.0	1,897.9	1,887.1	1,875.0	3.5	4.7	-42.17	52.8	-219.2	169.6	162.9	6.74	25.176	
2,000.0	1,997.7	1,986.6	1,973.5	3.7	5.0	-42.32	56.9	-233.1	179.0	171.9	7.11	25.167	
2,100.0	2,097.5	2,086.2	2,072.0	3.9	5.3	-42.45	61.1	-247.1	188.4	180.9	7.49	25.157	
2,200.0	2,197.3	2,185.7	2,170.5	4.1	5.6	-42.57	65.2	-261.0	197.8	190.0	7.87	25.146	
2,300.0	2,297.1	2,285.3	2,269.0	4.3	5.9	-42.68	69.4	-274.9	207.2	199.0	8.24	25.136	
2,400.0	2,396.9	2,384.8	2,367.4	4.5	6.2	-42.78	73.5	-288.8	216.6	208.0	8.62	25.125	
2,500.0	2,496.6	2,484.4	2,465.9	4.7	6.5	-42.87	77.6	-302.7	226.1	217.1	9.00	25.115	
2,600.0	2,596.4	2,583.9	2,564.4	4.9	6.8	-42.95	81.8	-316.6	235.5	226.1	9.38	25.104	
2,700.0	2,696.2	2,683.5	2,662.9	5.1	7.1	-43.03	85.9	-330.6	244.9	235.1	9.76	25.094	
2,800.0	2,796.0	2,783.1	2,761.4	5.4	7.4	-43.10	90.1	-344.5	254.3	244.1	10.14	25.084	
2,900.0	2,895.8	2,882.6	2,859.9	5.6	7.7	-43.17	94.2	-358.4	263.7	253.2	10.52	25.075	
3,000.0	2,995.6	2,982.2	2,958.4	5.8	8.1	-43.23	98.3	-372.3	273.1	262.2	10.90	25.065	
3,100.0	3,095.4	3,081.7	3,056.9	6.0	8.4	-43.29	102.5	-386.2	282.5	271.2	11.28	25.056	
3,200.0	3,195.2	3,181.3	3,155.4	6.2	8.7	-43.34	106.6	-400.1	291.9	280.3	11.66	25.048	
3,300.0	3,295.0	3,280.8	3,253.9	6.4	9.0	-43.39	110.8	-414.0	301.3	289.3	12.03	25.039	
3,400.0	3,394.8	3,380.4	3,352.4	6.6	9.3	-43.44	114.9	-428.0	310.8	298.3	12.41	25.031	
3,500.0	3,494.6	3,479.9	3,450.9	6.8	9.6	-43.49	119.0	-441.9	320.2	307.4	12.79	25.023	
3,600.0	3,594.4	3,579.5	3,549.3	7.0	9.9	-43.53	123.2	-455.8	329.6	316.4	13.18	25.016	
3,700.0	3,694.2	3,679.1	3,647.8	7.2	10.2	-43.57	127.3	-469.7	339.0	325.4	13.56	25.008	
3,800.0	3,794.0	3,778.6	3,746.3	7.4	10.5	-43.61	131.5	-483.6	348.4	334.5	13.94	25.001	
3,900.0	3,893.8	3,878.2	3,844.8	7.6	10.8	-43.64	135.6	-497.5	357.8	343.5	14.32	24.994	
4,000.0	3,993.6	3,977.7	3,943.3	7.8	11.1	-43.67	139.7	-511.5	367.2	352.5	14.70	24.988	
4,100.0	4,093.4	4,077.3	4,041.8	8.0	11.4	-43.71	143.9	-525.4	376.6	361.6	15.08	24.981	
4,200.0	4,193.2	4,176.8	4,140.3	8.2	11.8	-43.74	148.0	-539.3	386.1	370.6	15.46	24.975	
4,300.0	4,293.0	4,276.4	4,238.8	8.4	12.1	-43.77	152.2	-553.2	395.5	379.6	15.84	24.969	
4,400.0	4,392.8	4,375.9	4,337.3	8.6	12.4	-43.79	156.3	-567.1	404.9	388.7	16.22	24.963	
4,500.0	4,492.6	4,475.5	4,435.8	8.9	12.7	-43.82	160.4	-581.0	414.3	397.7	16.60	24.958	
4,600.0	4,592.4	4,575.1	4,534.3	9.1	13.0	-43.85	164.6	-595.0	423.7	406.7	16.98	24.952	
4,700.0	4,692.2	4,674.6	4,632.7	9.3	13.3	-43.87	168.7	-608.9	433.1	415.8	17.36	24.947	
4,800.0	4,792.0	4,774.2	4,731.2	9.5	13.6	-43.89	172.9	-622.8	442.5	424.8	17.74	24.942	
4,900.0	4,891.8	4,873.7	4,829.7	9.7	13.9	-43.92	177.0	-636.7	452.0	433.8	18.12	24.937	
5,000.0	4,991.6	4,973.3	4,928.2	9.9	14.2	-43.94	181.1	-650.6	461.4	442.9	18.50	24.933	

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 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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
5,100.0	5,091.4	5,072.8	5,026.7	10.1	14.5	-43.96	185.3	-664.5	470.8	451.9	18.89	24.928	
5,200.0	5,191.2	5,172.4	5,125.2	10.3	14.8	-43.98	189.4	-678.4	480.2	460.9	19.27	24.924	
5,300.0	5,291.0	5,271.9	5,223.7	10.5	15.2	-44.00	193.6	-692.4	489.6	470.0	19.65	24.919	
5,400.0	5,390.8	5,371.5	5,322.2	10.7	15.5	-44.02	197.7	-706.3	499.0	479.0	20.03	24.915	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 2F-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
0.0	0.0	1.0	1.0	0.0	0.0	-89.96	0.0	-22.4	22.4				
100.0	100.0	101.0	101.0	0.1	0.1	-89.96	0.0	-22.4	22.4	22.1	0.25	90.849	
200.0	200.0	201.0	201.0	0.3	0.3	-89.96	0.0	-22.4	22.4	21.8	0.60	37.565	
300.0	300.0	301.0	301.0	0.5	0.5	-89.96	0.0	-22.4	22.4	21.4	0.94	23.678	
366.3	366.3	367.3	367.3	0.6	0.6	-89.96	0.0	-22.4	22.4	21.2	1.18	19.015	CC
400.0	400.0	401.0	401.0	0.6	0.6	-89.96	0.0	-22.4	22.4	21.1	1.29	17.287	ES
500.0	500.0	500.6	500.6	0.8	0.8	-89.04	0.4	-23.2	23.2	21.5	1.64	14.109	
600.0	600.0	600.2	600.2	1.0	1.0	-86.66	1.5	-25.5	25.6	23.6	1.99	12.852	
700.0	700.0	699.7	699.6	1.2	1.2	-38.31	3.3	-29.5	29.0	26.7	2.34	12.392	
800.0	800.0	799.1	798.8	1.3	1.4	-37.57	5.9	-35.0	32.7	30.0	2.69	12.150	
900.0	899.9	898.5	897.9	1.5	1.6	-37.76	9.1	-42.0	36.6	33.6	3.04	12.037	
1,000.0	999.7	998.1	997.1	1.7	1.8	-38.66	13.0	-50.4	40.7	37.3	3.40	11.953	
1,100.0	1,099.5	1,098.0	1,096.5	1.9	2.0	-39.64	17.0	-58.9	44.6	40.9	3.77	11.838	
1,200.0	1,199.3	1,198.0	1,196.0	2.1	2.2	-40.45	21.0	-67.5	48.6	44.4	4.14	11.738	
1,300.0	1,299.1	1,297.9	1,295.5	2.3	2.5	-41.15	25.0	-76.1	52.5	48.0	4.51	11.650	
1,400.0	1,398.9	1,397.8	1,395.0	2.5	2.7	-41.74	28.9	-84.6	56.5	51.6	4.88	11.571	
1,500.0	1,498.7	1,497.7	1,494.4	2.7	2.9	-42.26	32.9	-93.2	60.4	55.2	5.25	11.501	
1,600.0	1,598.5	1,597.7	1,593.9	2.9	3.2	-42.71	36.9	-101.7	64.4	58.8	5.63	11.437	
1,700.0	1,698.3	1,697.6	1,693.4	3.1	3.4	-43.12	40.8	-110.3	68.4	62.4	6.01	11.380	
1,800.0	1,798.1	1,797.5	1,792.9	3.3	3.6	-43.47	44.8	-118.8	72.3	65.9	6.39	11.328	
1,900.0	1,897.9	1,897.4	1,892.3	3.5	3.9	-43.79	48.8	-127.4	76.3	69.5	6.76	11.281	
2,000.0	1,997.7	1,997.3	1,991.8	3.7	4.1	-44.08	52.8	-135.9	80.3	73.1	7.14	11.238	
2,100.0	2,097.5	2,097.3	2,091.3	3.9	4.4	-44.34	56.7	-144.5	84.3	76.7	7.52	11.198	
2,200.0	2,197.3	2,197.2	2,190.8	4.1	4.6	-44.58	60.7	-153.0	88.2	80.3	7.91	11.162	
2,300.0	2,297.1	2,297.1	2,290.2	4.3	4.8	-44.80	64.7	-161.6	92.2	83.9	8.29	11.128	
2,400.0	2,396.9	2,397.0	2,389.7	4.5	5.1	-45.00	68.7	-170.2	96.2	87.5	8.67	11.097	
2,500.0	2,496.6	2,496.9	2,489.2	4.7	5.3	-45.18	72.6	-178.7	100.2	91.1	9.05	11.068	
2,600.0	2,596.4	2,596.9	2,588.7	4.9	5.5	-45.35	76.6	-187.3	104.2	94.7	9.44	11.041	
2,700.0	2,696.2	2,696.8	2,688.1	5.1	5.8	-45.51	80.6	-195.8	108.2	98.3	9.82	11.016	
2,800.0	2,796.0	2,796.7	2,787.6	5.4	6.0	-45.65	84.5	-204.4	112.1	101.9	10.20	10.992	
2,900.0	2,895.8	2,896.6	2,887.1	5.6	6.3	-45.79	88.5	-212.9	116.1	105.5	10.59	10.970	
3,000.0	2,995.6	2,996.5	2,986.6	5.8	6.5	-45.92	92.5	-221.5	120.1	109.1	10.97	10.949	
3,100.0	3,095.4	3,096.5	3,086.0	6.0	6.7	-46.04	96.5	-230.0	124.1	112.7	11.35	10.930	
3,200.0	3,195.2	3,196.4	3,185.5	6.2	7.0	-46.15	100.4	-238.6	128.1	116.4	11.74	10.912	
3,300.0	3,295.0	3,296.3	3,285.0	6.4	7.2	-46.25	104.4	-247.1	132.1	120.0	12.12	10.894	
3,400.0	3,394.8	3,396.2	3,384.4	6.6	7.5	-46.35	108.4	-255.7	136.1	123.6	12.51	10.878	
3,500.0	3,494.6	3,496.1	3,483.9	6.8	7.7	-46.44	112.4	-264.2	140.1	127.2	12.89	10.862	
3,600.0	3,594.4	3,596.1	3,583.4	7.0	7.9	-46.53	116.3	-272.8	144.0	130.8	13.28	10.848	
3,700.0	3,694.2	3,696.0	3,682.9	7.2	8.2	-46.61	120.3	-281.4	148.0	134.4	13.66	10.834	
3,800.0	3,794.0	3,795.9	3,782.3	7.4	8.4	-46.69	124.3	-289.9	152.0	138.0	14.05	10.820	
3,900.0	3,893.8	3,895.8	3,881.8	7.6	8.6	-46.77	128.2	-298.5	156.0	141.6	14.44	10.808	
4,000.0	3,993.6	3,995.7	3,981.3	7.8	8.9	-46.84	132.2	-307.0	160.0	145.2	14.82	10.796	
4,100.0	4,093.4	4,095.7	4,080.8	8.0	9.1	-46.91	136.2	-315.6	164.0	148.8	15.21	10.784	
4,200.0	4,193.2	4,195.6	4,180.2	8.2	9.4	-46.97	140.2	-324.1	168.0	152.4	15.59	10.773	
4,300.0	4,293.0	4,295.5	4,279.7	8.4	9.6	-47.03	144.1	-332.7	172.0	156.0	15.98	10.763	
4,400.0	4,392.8	4,395.4	4,379.2	8.6	9.8	-47.09	148.1	-341.2	176.0	159.6	16.37	10.753	
4,500.0	4,492.6	4,495.3	4,478.7	8.9	10.1	-47.14	152.1	-349.8	180.0	163.2	16.75	10.743	
4,600.0	4,592.4	4,595.3	4,578.1	9.1	10.3	-47.20	156.1	-358.3	184.0	166.8	17.14	10.734	
4,700.0	4,692.2	4,695.2	4,677.6	9.3	10.6	-47.25	160.0	-366.9	187.9	170.4	17.52	10.725	
4,800.0	4,792.0	4,795.1	4,777.1	9.5	10.8	-47.30	164.0	-375.5	191.9	174.0	17.91	10.716	
4,900.0	4,891.8	4,895.0	4,876.6	9.7	11.0	-47.35	168.0	-384.0	195.9	177.6	18.30	10.708	
5,000.0	4,991.6	4,994.9	4,976.0	9.9	11.3	-47.39	171.9	-392.6	199.9	181.2	18.68	10.700	

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 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 2F-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
5,100.0	5,091.4	5,094.9	5,075.5	10.1	11.5	-47.43	175.9	-401.1	203.9	184.8	19.07	10.693	
5,200.0	5,191.2	5,194.8	5,175.0	10.3	11.8	-47.48	179.9	-409.7	207.9	188.5	19.46	10.686	
5,300.0	5,291.0	5,294.7	5,274.5	10.5	12.0	-47.52	183.9	-418.2	211.9	192.1	19.84	10.679	
5,400.0	5,390.8	5,394.6	5,373.9	10.7	12.2	-47.55	187.8	-426.8	215.9	195.7	20.23	10.672	
5,500.0	5,490.6	5,494.5	5,473.4	10.9	12.5	-47.59	191.8	-435.3	219.9	199.3	20.62	10.665	
5,600.0	5,590.4	5,594.5	5,572.9	11.1	12.7	-47.63	195.8	-443.9	223.9	202.9	21.00	10.659	
5,700.0	5,690.2	5,694.4	5,672.4	11.3	13.0	-47.66	199.8	-452.4	227.9	206.5	21.39	10.653	
5,800.0	5,790.0	5,794.3	5,771.8	11.5	13.2	-47.70	203.7	-461.0	231.9	210.1	21.78	10.647	
5,900.0	5,889.8	5,894.2	5,871.3	11.7	13.4	-47.73	207.7	-469.5	235.9	213.7	22.16	10.641	
6,000.0	5,989.6	5,994.1	5,970.8	11.9	13.7	-47.76	211.7	-478.1	239.9	217.3	22.55	10.636	
6,100.0	6,089.4	6,094.1	6,070.2	12.2	13.9	-47.79	215.6	-486.7	243.8	220.9	22.94	10.631	
6,200.0	6,189.2	6,194.0	6,169.7	12.4	14.2	-47.82	219.6	-495.2	247.8	224.5	23.33	10.625	
6,300.0	6,289.0	6,293.9	6,269.2	12.6	14.4	-47.85	223.6	-503.8	251.8	228.1	23.71	10.620	
6,400.0	6,388.8	6,393.8	6,368.7	12.8	14.6	-47.87	227.6	-512.3	255.8	231.7	24.10	10.616	
6,500.0	6,488.6	6,493.7	6,468.1	13.0	14.9	-47.90	231.5	-520.9	259.8	235.3	24.49	10.611	
6,600.0	6,588.4	6,593.7	6,567.6	13.2	15.1	-14.74	235.5	-529.4	263.8	238.9	24.87	10.607	
6,700.0	6,687.8	6,692.7	6,666.3	13.3	15.4	73.57	239.4	-537.9	267.3	242.4	24.95	10.715	
6,800.0	6,784.4	6,788.3	6,761.3	13.3	15.6	86.54	243.2	-546.1	272.4	247.7	24.71	11.023	
6,900.0	6,875.2	6,885.0	6,857.7	13.3	15.8	96.09	242.9	-554.4	282.9	258.6	24.36	11.612	
7,000.0	6,957.5	6,991.3	6,961.8	13.3	15.9	104.02	224.5	-563.3	298.9	274.9	24.07	12.422	
7,100.0	7,028.7	7,108.3	7,070.3	13.3	16.0	110.68	182.3	-572.7	318.7	294.8	23.83	13.373	
7,200.0	7,086.7	7,238.4	7,178.2	13.5	16.1	116.15	110.7	-581.9	339.7	316.0	23.67	14.349	
7,300.0	7,129.7	7,383.1	7,275.8	13.9	16.3	120.36	4.7	-590.3	359.1	335.5	23.68	15.169	
7,400.0	7,156.4	7,542.2	7,348.9	14.4	16.8	123.12	-136.0	-596.6	374.1	350.0	24.08	15.533	
7,500.0	7,166.0	7,711.8	7,381.4	15.1	17.7	124.20	-301.7	-599.4	382.0	356.9	25.04	15.257	
7,600.0	7,166.0	7,822.9	7,382.0	16.0	18.6	124.09	-412.8	-599.5	383.6	356.9	26.69	14.374	
7,700.0	7,166.0	7,922.9	7,382.0	17.1	19.5	123.95	-512.8	-599.5	385.1	356.6	28.51	13.506	
7,800.0	7,166.0	8,022.9	7,382.0	18.2	20.5	123.80	-612.8	-599.5	386.5	356.0	30.51	12.668	
7,900.0	7,166.0	8,122.9	7,382.0	19.4	21.6	123.66	-712.8	-599.5	388.0	355.3	32.66	11.877	
8,000.0	7,166.0	8,222.9	7,382.0	20.7	22.8	123.52	-812.8	-599.5	389.4	354.5	34.94	11.145	
8,100.0	7,166.0	8,322.8	7,382.0	22.1	24.1	123.37	-912.7	-599.5	390.9	353.6	37.32	10.473	
8,200.0	7,166.0	8,422.8	7,382.0	23.5	25.4	123.23	-1,012.7	-599.5	392.3	352.5	39.79	9.861	
8,300.0	7,166.0	8,522.8	7,382.0	25.0	26.7	123.09	-1,112.7	-599.5	393.8	351.5	42.33	9.303	
8,400.0	7,166.0	8,622.8	7,382.0	26.5	28.2	122.96	-1,212.7	-599.5	395.3	350.3	44.93	8.797	
8,500.0	7,166.0	8,722.8	7,382.0	28.0	29.6	122.82	-1,312.7	-599.5	396.7	349.1	47.59	8.337	
8,600.0	7,166.0	8,822.8	7,382.0	29.6	31.1	122.68	-1,412.7	-599.5	398.2	347.9	50.29	7.917	
8,700.0	7,166.0	8,922.7	7,382.0	31.1	32.6	122.55	-1,512.7	-599.5	399.7	346.6	53.04	7.535	
8,800.0	7,166.0	9,022.7	7,382.0	32.7	34.1	122.41	-1,612.6	-599.5	401.1	345.3	55.82	7.186	
8,900.0	7,166.0	9,122.7	7,382.0	34.3	35.7	122.28	-1,712.6	-599.5	402.6	344.0	58.63	6.867	
9,000.0	7,166.0	9,222.7	7,382.0	35.9	37.2	122.15	-1,812.6	-599.5	404.1	342.6	61.47	6.573	
9,100.0	7,166.0	9,322.7	7,382.0	37.6	38.8	122.02	-1,912.6	-599.5	405.6	341.2	64.34	6.303	
9,200.0	7,166.0	9,422.7	7,382.0	39.2	40.4	121.89	-2,012.6	-599.5	407.0	339.8	67.23	6.054	
9,300.0	7,166.0	9,522.7	7,382.0	40.9	42.0	121.76	-2,112.6	-599.5	408.5	338.4	70.14	5.824	
9,400.0	7,166.0	9,622.6	7,382.0	42.5	43.7	121.63	-2,212.5	-599.5	410.0	336.9	73.08	5.611	
9,500.0	7,166.0	9,722.6	7,382.0	44.2	45.3	121.50	-2,312.5	-599.5	411.5	335.5	76.03	5.413	
9,600.0	7,166.0	9,822.6	7,382.0	45.9	46.9	121.38	-2,412.5	-599.5	413.0	334.0	78.99	5.228	
9,700.0	7,166.0	9,922.6	7,382.0	47.6	48.6	121.25	-2,512.5	-599.5	414.5	332.5	81.98	5.056	
9,800.0	7,166.0	10,022.6	7,382.0	49.2	50.2	121.13	-2,612.5	-599.5	416.0	331.0	84.98	4.895	
9,900.0	7,166.0	10,122.6	7,382.0	50.9	51.9	121.00	-2,712.5	-599.5	417.5	329.5	87.99	4.745	
10,000.0	7,166.0	10,222.5	7,382.0	52.6	53.6	120.88	-2,812.5	-599.5	419.0	328.0	91.01	4.603	
10,100.0	7,166.0	10,322.5	7,382.0	54.3	55.2	120.76	-2,912.4	-599.5	420.5	326.4	94.05	4.471	
10,200.0	7,166.0	10,422.5	7,382.0	56.0	56.9	120.64	-3,012.4	-599.5	422.0	324.9	97.10	4.346	

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 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 2F-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
10,300.0	7,166.0	10,522.5	7,382.0	57.7	58.6	120.52	-3,112.4	-599.5	423.5	323.3	100.16	4.228	
10,400.0	7,166.0	10,622.5	7,382.0	59.4	60.3	120.40	-3,212.4	-599.5	425.0	321.7	103.23	4.117	
10,500.0	7,166.0	10,722.5	7,382.0	61.2	62.0	120.28	-3,312.4	-599.5	426.5	320.2	106.31	4.012	
10,600.0	7,166.0	10,822.5	7,382.0	62.9	63.7	120.16	-3,412.4	-599.5	427.9	318.4	109.48	3.909	
10,700.0	7,166.0	10,922.5	7,382.0	64.6	65.4	120.15	-3,512.4	-599.5	428.1	315.4	112.70	3.799	
10,800.0	7,166.0	11,022.4	7,382.0	66.3	67.1	120.25	-3,612.4	-599.5	426.8	311.1	115.75	3.688	
10,900.0	7,166.0	11,122.4	7,382.0	68.0	68.8	120.48	-3,712.3	-599.5	424.1	305.4	118.63	3.575	
11,000.0	7,166.0	11,222.3	7,382.0	69.8	70.5	120.77	-3,812.2	-599.5	420.5	299.2	121.27	3.467	
11,100.0	7,166.0	11,322.2	7,382.0	71.5	72.2	121.06	-3,912.1	-599.5	417.0	293.1	123.89	3.366	
11,200.0	7,166.0	11,422.1	7,382.0	73.2	73.9	121.35	-4,012.0	-599.5	413.5	287.0	126.49	3.269	
11,300.0	7,166.0	11,522.0	7,382.0	74.9	75.6	121.65	-4,112.0	-599.5	409.9	280.9	129.06	3.176	
11,400.0	7,166.0	11,622.0	7,382.0	76.7	77.3	121.96	-4,211.9	-599.5	406.4	274.8	131.60	3.088	
11,500.0	7,166.0	11,720.0	7,382.0	78.4	79.0	122.26	-4,309.9	-599.5	403.0	268.9	134.11	3.005	
11,600.0	7,166.0	11,814.4	7,382.0	80.1	80.6	122.46	-4,404.3	-600.8	400.7	264.0	136.68	2.932	
11,700.0	7,166.0	11,908.8	7,382.0	81.9	82.2	122.54	-4,498.7	-603.7	399.8	260.4	139.41	2.867	
11,800.0	7,166.0	12,008.6	7,382.0	83.6	84.0	122.55	-4,598.4	-607.6	399.6	257.3	142.31	2.808	
11,900.0	7,166.0	12,108.6	7,382.0	85.3	85.7	122.57	-4,698.3	-611.5	399.4	254.2	145.22	2.750	
12,000.0	7,166.0	12,208.6	7,382.0	87.1	87.4	122.59	-4,798.3	-615.4	399.2	251.1	148.12	2.695	
12,100.0	7,166.0	12,308.6	7,382.0	88.8	89.1	122.61	-4,898.2	-619.3	399.0	248.0	151.02	2.642	
12,200.0	7,166.0	12,408.6	7,382.0	90.6	90.9	122.62	-4,998.1	-623.2	398.8	244.9	153.93	2.591	
12,300.0	7,166.0	12,508.6	7,382.0	92.3	92.6	122.64	-5,098.0	-627.1	398.6	241.8	156.83	2.542	
12,400.0	7,166.0	12,608.6	7,382.0	94.0	94.3	122.66	-5,198.0	-631.0	398.4	238.7	159.74	2.494	
12,500.0	7,166.0	12,708.6	7,382.0	95.8	96.1	122.68	-5,297.9	-634.8	398.2	235.6	162.64	2.448	
12,600.0	7,166.0	12,808.6	7,382.0	97.5	97.8	122.70	-5,397.8	-638.7	398.0	232.5	165.54	2.404	
12,700.0	7,166.0	12,908.6	7,382.0	99.3	99.5	122.71	-5,497.7	-642.6	397.8	229.4	168.45	2.362	
12,800.0	7,166.0	13,008.6	7,382.0	101.0	101.3	122.73	-5,597.7	-646.5	397.6	226.3	171.35	2.321	
12,900.0	7,166.0	13,108.6	7,382.0	102.7	103.0	122.75	-5,697.6	-650.4	397.4	223.2	174.25	2.281	
13,000.0	7,166.0	13,208.6	7,382.0	104.5	104.8	122.77	-5,797.5	-654.3	397.2	220.1	177.15	2.242	
13,100.0	7,166.0	13,308.6	7,382.0	106.2	106.5	122.78	-5,897.4	-658.2	397.1	217.0	180.06	2.205	
13,200.0	7,166.0	13,408.6	7,382.0	108.0	108.2	122.80	-5,997.4	-662.1	396.9	213.9	182.96	2.169	
13,300.0	7,166.0	13,508.6	7,382.0	109.7	110.0	122.82	-6,097.3	-666.0	396.7	210.8	185.86	2.134	
13,400.0	7,166.0	13,608.6	7,382.0	111.5	111.7	122.84	-6,197.2	-669.9	396.5	207.7	188.76	2.100	
13,500.0	7,166.0	13,708.6	7,382.0	113.2	113.5	122.86	-6,297.1	-673.8	396.3	204.6	191.66	2.068	
13,600.0	7,166.0	13,808.6	7,382.0	114.9	115.2	122.88	-6,397.0	-677.7	396.1	201.5	194.56	2.036	
13,700.0	7,166.0	13,908.6	7,382.0	116.7	116.9	122.89	-6,497.0	-681.6	395.9	198.4	197.46	2.005	
13,800.0	7,166.0	14,008.6	7,382.0	118.4	118.7	122.91	-6,596.9	-685.5	395.7	195.3	200.35	1.975	
13,900.0	7,166.0	14,108.6	7,382.0	120.2	120.4	122.93	-6,696.8	-689.4	395.5	192.3	203.25	1.946	
14,000.0	7,166.0	14,208.6	7,382.0	121.9	122.2	122.95	-6,796.7	-693.3	395.3	189.2	206.15	1.918	
14,100.0	7,166.0	14,308.6	7,382.0	123.7	123.9	122.97	-6,896.7	-697.2	395.1	186.1	209.04	1.890	
14,200.0	7,166.0	14,408.6	7,382.0	125.4	125.6	122.98	-6,996.6	-701.0	394.9	183.0	211.94	1.863	
14,300.0	7,166.0	14,508.6	7,382.0	127.2	127.4	123.00	-7,096.5	-704.9	394.7	179.9	214.83	1.837	
14,400.0	7,166.0	14,608.6	7,382.0	128.9	129.1	123.02	-7,196.4	-708.8	394.5	176.8	217.73	1.812	
14,500.0	7,166.0	14,708.6	7,382.0	130.7	130.9	123.04	-7,296.4	-712.7	394.4	173.7	220.62	1.787	
14,600.0	7,166.0	14,808.6	7,382.0	132.4	132.6	123.06	-7,396.3	-716.6	394.2	170.6	223.51	1.764	
14,700.0	7,166.0	14,908.6	7,382.0	134.2	134.4	123.07	-7,496.2	-720.5	394.0	167.6	226.40	1.740	
14,800.0	7,166.0	15,008.6	7,382.0	135.9	136.1	123.09	-7,596.1	-724.4	393.8	164.5	229.29	1.717	
14,900.0	7,166.0	15,108.6	7,382.0	137.7	137.9	123.11	-7,696.1	-728.3	393.6	161.4	232.18	1.695	
14,921.1	7,166.0	15,129.8	7,382.0	138.0	138.2	123.12	-7,717.2	-729.1	393.5	160.8	232.79	1.691	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 2H-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
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	19.6	19.6				
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	19.6	19.6	19.3	0.24	80.060	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.59	32.966	
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	19.6	19.6	18.6	0.94	20.756	
400.0	400.0	400.0	400.0	0.6	0.6	90.05	0.0	19.6	19.6	18.3	1.29	15.147	
500.0	500.0	500.0	500.0	0.8	0.8	90.05	0.0	19.6	19.6	17.9	1.64	11.924	
600.0	600.0	600.0	600.0	1.0	1.0	90.05	0.0	19.6	19.6	17.6	1.99	9.832	CC, ES
700.0	700.0	700.1	700.1	1.2	1.2	135.67	0.8	19.3	19.9	17.6	2.34	8.517	
800.0	800.0	800.2	800.2	1.3	1.3	133.83	3.3	18.5	21.0	18.3	2.69	7.809	
900.0	899.9	900.2	900.1	1.5	1.5	131.73	7.2	17.2	23.0	19.9	3.05	7.522	
1,000.0	999.7	1,000.2	1,000.0	1.7	1.7	132.27	11.4	15.9	25.9	22.5	3.41	7.594	
1,100.0	1,099.5	1,100.1	1,099.8	1.9	1.9	133.24	15.5	14.5	29.2	25.4	3.78	7.711	
1,200.0	1,199.3	1,200.1	1,199.7	2.1	2.1	134.01	19.6	13.2	32.4	28.2	4.15	7.805	
1,300.0	1,299.1	1,300.0	1,299.5	2.3	2.3	134.65	23.7	11.8	35.6	31.1	4.52	7.883	
1,400.0	1,398.9	1,400.0	1,399.4	2.5	2.5	135.17	27.9	10.5	38.9	34.0	4.89	7.948	
1,500.0	1,498.7	1,499.9	1,499.2	2.7	2.6	135.62	32.0	9.2	42.1	36.9	5.27	8.003	
1,600.0	1,598.5	1,599.9	1,599.1	2.9	2.8	136.00	36.1	7.8	45.4	39.7	5.64	8.050	
1,700.0	1,698.3	1,699.8	1,698.9	3.1	3.0	136.33	40.3	6.5	48.6	42.6	6.01	8.092	
1,800.0	1,798.1	1,799.8	1,798.8	3.3	3.2	136.62	44.4	5.1	51.9	45.5	6.38	8.128	
1,900.0	1,897.9	1,899.7	1,898.6	3.5	3.4	136.88	48.5	3.8	55.1	48.4	6.76	8.160	
2,000.0	1,997.7	1,999.6	1,998.5	3.7	3.6	137.11	52.6	2.4	58.4	51.3	7.13	8.188	
2,100.0	2,097.5	2,099.6	2,098.3	3.9	3.8	137.31	56.8	1.1	61.7	54.2	7.51	8.214	
2,200.0	2,197.3	2,199.5	2,198.2	4.1	4.0	137.49	60.9	-0.2	64.9	57.0	7.88	8.237	
2,300.0	2,297.1	2,299.5	2,298.0	4.3	4.1	137.66	65.0	-1.6	68.2	59.9	8.26	8.257	
2,400.0	2,396.9	2,399.4	2,397.9	4.5	4.3	137.81	69.1	-2.9	71.4	62.8	8.63	8.276	
2,500.0	2,496.6	2,499.4	2,497.7	4.7	4.5	137.94	73.3	-4.3	74.7	65.7	9.01	8.294	
2,600.0	2,596.4	2,599.3	2,597.6	4.9	4.7	138.07	77.4	-5.6	78.0	68.6	9.38	8.310	
2,700.0	2,696.2	2,699.3	2,697.4	5.1	4.9	138.19	81.5	-6.9	81.2	71.5	9.76	8.324	
2,800.0	2,796.0	2,799.2	2,797.3	5.4	5.1	138.29	85.6	-8.3	84.5	74.3	10.13	8.338	
2,900.0	2,895.8	2,899.2	2,897.2	5.6	5.3	138.39	89.8	-9.6	87.7	77.2	10.51	8.350	
3,000.0	2,995.6	2,999.1	2,997.0	5.8	5.5	138.48	93.9	-11.0	91.0	80.1	10.88	8.362	
3,100.0	3,095.4	3,099.1	3,096.9	6.0	5.7	138.57	98.0	-12.3	94.3	83.0	11.26	8.373	
3,200.0	3,195.2	3,199.0	3,196.7	6.2	5.9	138.65	102.2	-13.7	97.5	85.9	11.63	8.383	
3,300.0	3,295.0	3,299.0	3,296.6	6.4	6.0	138.72	106.3	-15.0	100.8	88.8	12.01	8.393	
3,400.0	3,394.8	3,398.9	3,396.4	6.6	6.2	138.79	110.4	-16.3	104.0	91.7	12.38	8.402	
3,500.0	3,494.6	3,498.8	3,496.3	6.8	6.4	138.86	114.5	-17.7	107.3	94.5	12.76	8.410	
3,600.0	3,594.4	3,598.8	3,596.1	7.0	6.6	138.92	118.7	-19.0	110.6	97.4	13.13	8.418	
3,700.0	3,694.2	3,698.7	3,696.0	7.2	6.8	138.98	122.8	-20.4	113.8	100.3	13.51	8.425	
3,800.0	3,794.0	3,798.7	3,795.8	7.4	7.0	139.03	126.9	-21.7	117.1	103.2	13.88	8.432	
3,900.0	3,893.8	3,898.6	3,895.7	7.6	7.2	139.08	131.0	-23.0	120.3	106.1	14.26	8.439	
4,000.0	3,993.6	3,998.6	3,995.5	7.8	7.4	139.13	135.2	-24.4	123.6	109.0	14.64	8.445	
4,100.0	4,093.4	4,098.5	4,095.4	8.0	7.6	139.18	139.3	-25.7	126.9	111.9	15.01	8.451	
4,200.0	4,193.2	4,198.5	4,195.2	8.2	7.7	139.22	143.4	-27.1	130.1	114.7	15.39	8.457	
4,300.0	4,293.0	4,298.4	4,295.1	8.4	7.9	139.27	147.5	-28.4	133.4	117.6	15.76	8.462	
4,400.0	4,392.8	4,398.4	4,394.9	8.6	8.1	139.31	151.7	-29.8	136.7	120.5	16.14	8.468	
4,500.0	4,492.6	4,498.3	4,494.8	8.9	8.3	139.34	155.8	-31.1	139.9	123.4	16.51	8.473	
4,600.0	4,592.4	4,598.3	4,594.6	9.1	8.5	139.38	159.9	-32.4	143.2	126.3	16.89	8.477	
4,700.0	4,692.2	4,698.2	4,694.5	9.3	8.7	139.42	164.0	-33.8	146.4	129.2	17.27	8.482	
4,800.0	4,792.0	4,798.2	4,794.4	9.5	8.9	139.45	168.2	-35.1	149.7	132.1	17.64	8.486	
4,900.0	4,891.8	4,898.1	4,894.2	9.7	9.1	139.48	172.3	-36.5	153.0	135.0	18.02	8.490	
5,000.0	4,991.6	4,998.0	4,994.1	9.9	9.3	139.51	176.4	-37.8	156.2	137.8	18.39	8.494	
5,100.0	5,091.4	5,098.0	5,093.9	10.1	9.5	139.54	180.6	-39.1	159.5	140.7	18.77	8.498	

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 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 2H-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
5,200.0	5,191.2	5,197.9	5,193.8	10.3	9.6	139.57	184.7	-40.5	162.8	143.6	19.14	8.502	
5,300.0	5,291.0	5,297.9	5,293.6	10.5	9.8	139.60	188.8	-41.8	166.0	146.5	19.52	8.505	
5,400.0	5,390.8	5,397.8	5,393.5	10.7	10.0	139.62	192.9	-43.2	169.3	149.4	19.90	8.508	
5,500.0	5,490.6	5,497.8	5,493.3	10.9	10.2	139.65	197.1	-44.5	172.5	152.3	20.27	8.512	
5,600.0	5,590.4	5,597.7	5,593.2	11.1	10.4	139.67	201.2	-45.9	175.8	155.2	20.65	8.515	
5,700.0	5,690.2	5,697.7	5,693.0	11.3	10.6	139.69	205.3	-47.2	179.1	158.0	21.02	8.518	
5,800.0	5,790.0	5,797.6	5,792.9	11.5	10.8	139.72	209.4	-48.5	182.3	160.9	21.40	8.521	
5,900.0	5,889.8	5,897.6	5,892.7	11.7	11.0	139.74	213.6	-49.9	185.6	163.8	21.77	8.524	
6,000.0	5,989.6	5,997.5	5,992.6	11.9	11.2	139.76	217.7	-51.2	188.9	166.7	22.15	8.526	
6,100.0	6,089.4	6,097.5	6,092.4	12.2	11.4	139.78	221.8	-52.6	192.1	169.6	22.53	8.529	
6,200.0	6,189.2	6,197.4	6,192.3	12.4	11.5	139.80	225.9	-53.9	195.4	172.5	22.90	8.531	
6,300.0	6,289.0	6,297.4	6,292.1	12.6	11.7	139.82	230.1	-55.2	198.6	175.4	23.28	8.534	
6,400.0	6,388.8	6,397.3	6,392.0	12.8	11.9	139.84	234.2	-56.6	201.9	178.3	23.65	8.536	
6,500.0	6,488.6	6,497.2	6,491.8	13.0	12.1	139.85	238.3	-57.9	205.2	181.1	24.03	8.538	
6,600.0	6,588.4	6,597.2	6,591.7	13.2	12.3	173.02	242.4	-59.3	208.4	184.0	24.40	8.540	
6,700.0	6,687.8	6,696.3	6,690.7	13.3	12.5	-103.88	246.5	-60.6	211.0	186.2	24.80	8.511	
6,800.0	6,784.4	6,791.9	6,786.2	13.3	12.7	-103.18	250.5	-61.9	215.5	190.4	25.17	8.562	
6,900.0	6,875.2	6,893.0	6,887.0	13.3	12.8	-109.24	245.6	-63.2	225.5	200.3	25.23	8.937	
7,000.0	6,957.5	7,002.1	6,993.1	13.3	12.8	-115.81	220.6	-64.7	240.1	215.3	24.82	9.674	
7,100.0	7,028.7	7,120.8	7,100.8	13.3	12.8	-121.86	171.1	-66.1	257.3	233.3	24.02	10.712	
7,200.0	7,086.7	7,250.4	7,203.9	13.5	12.8	-127.01	93.1	-67.5	274.7	251.6	23.10	11.894	
7,300.0	7,129.7	7,391.4	7,293.2	13.9	13.0	-131.06	-15.6	-68.7	289.8	267.3	22.46	12.904	
7,400.0	7,156.4	7,542.5	7,356.3	14.4	13.6	-133.86	-152.4	-69.5	300.1	277.5	22.52	13.322	
7,500.0	7,166.0	7,700.2	7,381.8	15.1	14.7	-135.29	-307.4	-69.9	303.7	280.1	23.62	12.861	
7,600.0	7,166.0	7,805.6	7,382.0	16.0	15.6	-135.56	-412.8	-69.9	302.6	277.6	24.94	12.133	
7,700.0	7,166.0	7,905.6	7,382.0	17.1	16.7	-135.80	-512.8	-69.9	301.3	275.0	26.37	11.427	
7,800.0	7,166.0	8,005.6	7,382.0	18.2	17.9	-136.03	-612.8	-69.9	300.1	272.2	27.93	10.746	
7,900.0	7,166.0	8,105.5	7,382.0	19.4	19.1	-136.28	-712.8	-69.9	298.9	269.3	29.59	10.103	
8,000.0	7,166.0	8,205.5	7,382.0	20.7	20.5	-136.52	-812.8	-69.9	297.7	266.4	31.32	9.505	
8,100.0	7,166.0	8,305.5	7,382.0	22.1	21.9	-136.76	-912.7	-69.9	296.5	263.4	33.12	8.954	
8,200.0	7,166.0	8,405.5	7,382.0	23.5	23.3	-137.01	-1,012.7	-69.9	295.3	260.4	34.96	8.447	
8,300.0	7,166.0	8,505.5	7,382.0	25.0	24.8	-137.26	-1,112.7	-69.9	294.1	257.3	36.84	7.985	
8,400.0	7,166.0	8,605.5	7,382.0	26.5	26.3	-137.51	-1,212.7	-69.9	292.9	254.2	38.74	7.562	
8,500.0	7,166.0	8,705.5	7,382.0	28.0	27.8	-137.76	-1,312.7	-69.9	291.8	251.1	40.66	7.175	
8,600.0	7,166.0	8,805.4	7,382.0	29.6	29.4	-138.02	-1,412.7	-69.9	290.6	248.0	42.60	6.822	
8,700.0	7,166.0	8,905.4	7,382.0	31.1	31.0	-138.27	-1,512.7	-69.9	289.4	244.9	44.53	6.499	
8,800.0	7,166.0	9,005.4	7,382.0	32.7	32.6	-138.53	-1,612.6	-69.9	288.3	241.8	46.47	6.203	
8,900.0	7,166.0	9,105.4	7,382.0	34.3	34.2	-138.79	-1,712.6	-69.9	287.1	238.7	48.41	5.931	
9,000.0	7,166.0	9,205.4	7,382.0	35.9	35.9	-139.06	-1,812.6	-69.9	286.0	235.6	50.34	5.681	
9,100.0	7,166.0	9,305.4	7,382.0	37.6	37.5	-139.32	-1,912.6	-69.9	284.8	232.6	52.27	5.450	
9,200.0	7,166.0	9,405.3	7,382.0	39.2	39.2	-139.59	-2,012.6	-69.9	283.7	229.5	54.18	5.237	
9,300.0	7,166.0	9,505.3	7,382.0	40.9	40.8	-139.86	-2,112.6	-69.9	282.6	226.5	56.08	5.039	
9,400.0	7,166.0	9,605.3	7,382.0	42.5	42.5	-140.13	-2,212.5	-69.9	281.5	223.5	57.96	4.856	
9,500.0	7,166.0	9,705.3	7,382.0	44.2	44.2	-140.40	-2,312.5	-69.9	280.3	220.5	59.82	4.686	
9,600.0	7,166.0	9,805.3	7,382.0	45.9	45.8	-140.68	-2,412.5	-69.9	279.2	217.6	61.67	4.528	
9,700.0	7,166.0	9,905.3	7,382.0	47.6	47.5	-140.96	-2,512.5	-69.9	278.1	214.6	63.50	4.380	
9,800.0	7,166.0	10,005.3	7,382.0	49.2	49.2	-141.24	-2,612.5	-69.9	277.0	211.7	65.30	4.242	
9,900.0	7,166.0	10,105.2	7,382.0	50.9	50.9	-141.52	-2,712.5	-69.9	275.9	208.9	67.08	4.114	
10,000.0	7,166.0	10,205.2	7,382.0	52.6	52.6	-141.80	-2,812.5	-69.9	274.9	206.0	68.84	3.993	
10,100.0	7,166.0	10,305.2	7,382.0	54.3	54.3	-142.09	-2,912.4	-69.9	273.8	203.2	70.57	3.880	
10,200.0	7,166.0	10,405.2	7,382.0	56.0	56.0	-142.38	-3,012.4	-69.9	272.7	200.4	72.28	3.773	
10,300.0	7,166.0	10,505.2	7,382.0	57.7	57.7	-142.67	-3,112.4	-69.9	271.7	197.7	73.96	3.673	

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 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 2H-5H-F267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

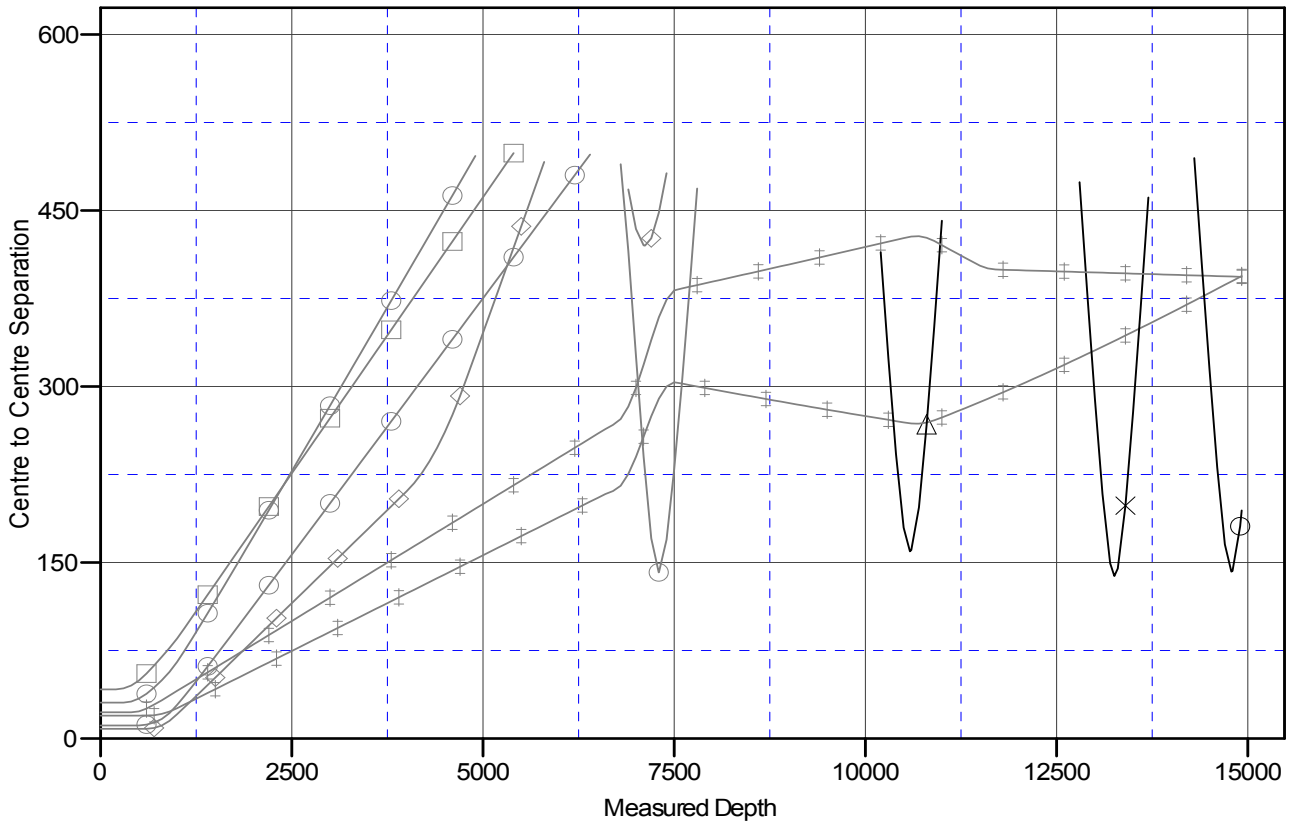
Offset Well Error: 0.0 ft

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
10,400.0	7,166.0	10,605.2	7,382.0	59.4	59.4	-142.97	-3,212.4	-69.9	270.6	195.0	75.61	3.579	
10,500.0	7,166.0	10,705.2	7,382.0	61.2	61.2	-143.26	-3,312.4	-69.9	269.5	192.3	77.23	3.490	
10,600.0	7,166.0	10,805.1	7,382.0	62.9	62.9	-143.54	-3,412.4	-69.9	268.6	189.7	78.87	3.405	
10,665.3	7,166.0	10,870.4	7,382.0	64.0	64.0	-143.60	-3,477.6	-69.9	268.4	188.2	80.14	3.349	
10,700.0	7,166.0	10,905.1	7,382.0	64.6	64.6	-143.58	-3,512.4	-69.9	268.4	187.5	80.89	3.318	
10,800.0	7,166.0	11,005.1	7,382.0	66.3	66.3	-143.34	-3,612.4	-69.9	269.3	185.9	83.36	3.231	
10,900.0	7,166.0	11,105.1	7,382.0	68.0	68.0	-142.81	-3,712.3	-69.9	271.2	184.9	86.32	3.142	
11,000.0	7,166.0	11,205.0	7,382.0	69.8	69.7	-142.12	-3,812.2	-69.9	273.7	184.1	89.61	3.055	
11,100.0	7,166.0	11,304.9	7,382.0	71.5	71.5	-141.45	-3,912.1	-69.9	276.3	183.4	92.93	2.973	
11,200.0	7,166.0	11,404.8	7,382.0	73.2	73.2	-140.78	-4,012.0	-69.9	278.9	182.6	96.28	2.897	
11,300.0	7,166.0	11,504.7	7,382.0	74.9	74.9	-140.13	-4,112.0	-69.9	281.5	181.8	99.67	2.824	
11,400.0	7,166.0	11,604.6	7,382.0	76.7	76.6	-139.50	-4,211.9	-69.9	284.2	181.1	103.09	2.757	
11,500.0	7,166.0	11,704.6	7,382.0	78.4	78.4	-138.87	-4,311.8	-69.9	286.9	180.3	106.53	2.693	
11,600.0	7,166.0	11,804.5	7,382.0	80.1	80.1	-138.26	-4,411.7	-69.9	289.6	179.6	110.01	2.633	
11,700.0	7,166.0	11,904.4	7,382.0	81.9	81.8	-137.65	-4,511.6	-69.9	292.4	178.9	113.50	2.576	
11,800.0	7,166.0	12,004.3	7,382.0	83.6	83.6	-137.06	-4,611.5	-69.9	295.2	178.1	117.02	2.522	
11,900.0	7,166.0	12,104.2	7,382.0	85.3	85.3	-136.48	-4,711.4	-69.9	298.0	177.4	120.56	2.472	
12,000.0	7,166.0	12,204.1	7,382.0	87.1	87.0	-135.91	-4,811.4	-69.9	300.8	176.7	124.12	2.424	
12,100.0	7,166.0	12,304.0	7,382.0	88.8	88.8	-135.35	-4,911.3	-69.9	303.7	176.0	127.69	2.379	
12,200.0	7,166.0	12,404.0	7,382.0	90.6	90.5	-134.81	-5,011.2	-69.9	306.6	175.4	131.28	2.336	
12,300.0	7,166.0	12,503.9	7,382.0	92.3	92.2	-134.27	-5,111.1	-69.9	309.6	174.7	134.89	2.295	
12,400.0	7,166.0	12,603.8	7,382.0	94.0	94.0	-133.74	-5,211.0	-69.9	312.6	174.0	138.52	2.256	
12,500.0	7,166.0	12,703.7	7,382.0	95.8	95.7	-133.22	-5,310.9	-69.9	315.5	173.4	142.15	2.220	
12,600.0	7,166.0	12,803.6	7,382.0	97.5	97.4	-132.72	-5,410.9	-69.9	318.6	172.8	145.80	2.185	
12,700.0	7,166.0	12,903.5	7,382.0	99.3	99.2	-132.22	-5,510.8	-69.9	321.6	172.1	149.46	2.152	
12,800.0	7,166.0	13,003.5	7,382.0	101.0	100.9	-131.73	-5,610.7	-69.9	324.7	171.5	153.13	2.120	
12,900.0	7,166.0	13,103.4	7,382.0	102.7	102.7	-131.25	-5,710.6	-69.9	327.8	170.9	156.81	2.090	
13,000.0	7,166.0	13,203.3	7,382.0	104.5	104.4	-130.78	-5,810.5	-69.9	330.9	170.4	160.50	2.061	
13,100.0	7,166.0	13,303.2	7,382.0	106.2	106.1	-130.32	-5,910.4	-69.9	334.0	169.8	164.20	2.034	
13,200.0	7,166.0	13,403.1	7,382.0	108.0	107.9	-129.86	-6,010.3	-69.9	337.2	169.3	167.91	2.008	
13,300.0	7,166.0	13,503.0	7,382.0	109.7	109.6	-129.42	-6,110.3	-69.9	340.3	168.7	171.62	1.983	
13,400.0	7,166.0	13,602.9	7,382.0	111.5	111.4	-128.98	-6,210.2	-69.9	343.5	168.2	175.33	1.959	
13,500.0	7,166.0	13,702.9	7,382.0	113.2	113.1	-128.55	-6,310.1	-69.9	346.8	167.7	179.06	1.937	
13,600.0	7,166.0	13,802.8	7,382.0	114.9	114.8	-128.13	-6,410.0	-69.9	350.0	167.2	182.79	1.915	
13,700.0	7,166.0	13,902.7	7,382.0	116.7	116.6	-127.72	-6,509.9	-69.9	353.2	166.7	186.52	1.894	
13,800.0	7,166.0	14,002.6	7,382.0	118.4	118.3	-127.31	-6,609.8	-69.9	356.5	166.3	190.26	1.874	
13,900.0	7,166.0	14,102.5	7,382.0	120.2	120.1	-126.92	-6,709.7	-69.9	359.8	165.8	194.00	1.855	
14,000.0	7,166.0	14,202.4	7,382.0	121.9	121.8	-126.53	-6,809.7	-69.9	363.1	165.4	197.74	1.836	
14,100.0	7,166.0	14,302.3	7,382.0	123.7	123.6	-126.14	-6,909.6	-69.9	366.4	164.9	201.49	1.819	
14,200.0	7,166.0	14,402.3	7,382.0	125.4	125.3	-125.77	-7,009.5	-69.9	369.8	164.5	205.24	1.802	
14,300.0	7,166.0	14,502.2	7,382.0	127.2	127.0	-125.40	-7,109.4	-69.9	373.1	164.1	208.99	1.785	
14,400.0	7,166.0	14,602.1	7,382.0	128.9	128.8	-125.03	-7,209.3	-69.9	376.5	163.8	212.74	1.770	
14,500.0	7,166.0	14,702.0	7,382.0	130.7	130.5	-124.67	-7,309.2	-69.9	379.9	163.4	216.50	1.755	
14,600.0	7,166.0	14,801.9	7,382.0	132.4	132.3	-124.32	-7,409.2	-69.9	383.3	163.0	220.25	1.740	
14,700.0	7,166.0	14,901.8	7,382.0	134.2	134.0	-123.98	-7,509.1	-69.9	386.7	162.7	224.01	1.726	
14,800.0	7,166.0	15,001.8	7,382.0	135.9	135.8	-123.64	-7,609.0	-69.9	390.1	162.4	227.77	1.713	
14,900.0	7,166.0	15,101.7	7,382.0	137.7	137.5	-123.31	-7,708.9	-69.9	393.6	162.0	231.53	1.700	
14,921.1	7,166.0	15,122.8	7,382.0	138.0	137.9	-123.24	-7,730.0	-69.9	394.3	162.0	232.32	1.697	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2G-5H-F267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4889.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4889.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2G-5H-F267	**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 @ 4889.0ft (Ensign)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Vogl-McCoy 2G-5H-F267
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.38°



L E G E N D

Geist 2D-5H-F267, Hz, Plan #1 V0
CHENG 3-8A (EXISTING), KMG WELL, SURVEYS V0
Vogl-McCoy 2E-5H-F267, Hz, Plan #1 V0
McCoy 2H-5H-F267, Hz, Plan #1 V0
Vogl-McCoy 2F-5H-F267, Hz, Plan #1 V0
DIER 24-8 (EXISTING), ENCANA WELL, SU
23-8 (EXISTING), ENCANA WELL, SURVEYS V0
Vogl-Geist 2F-5H-F267, Hz, Plan #1 V0
Vogl-Geist 2E-5H-F267, Hz, Plan #1 V0