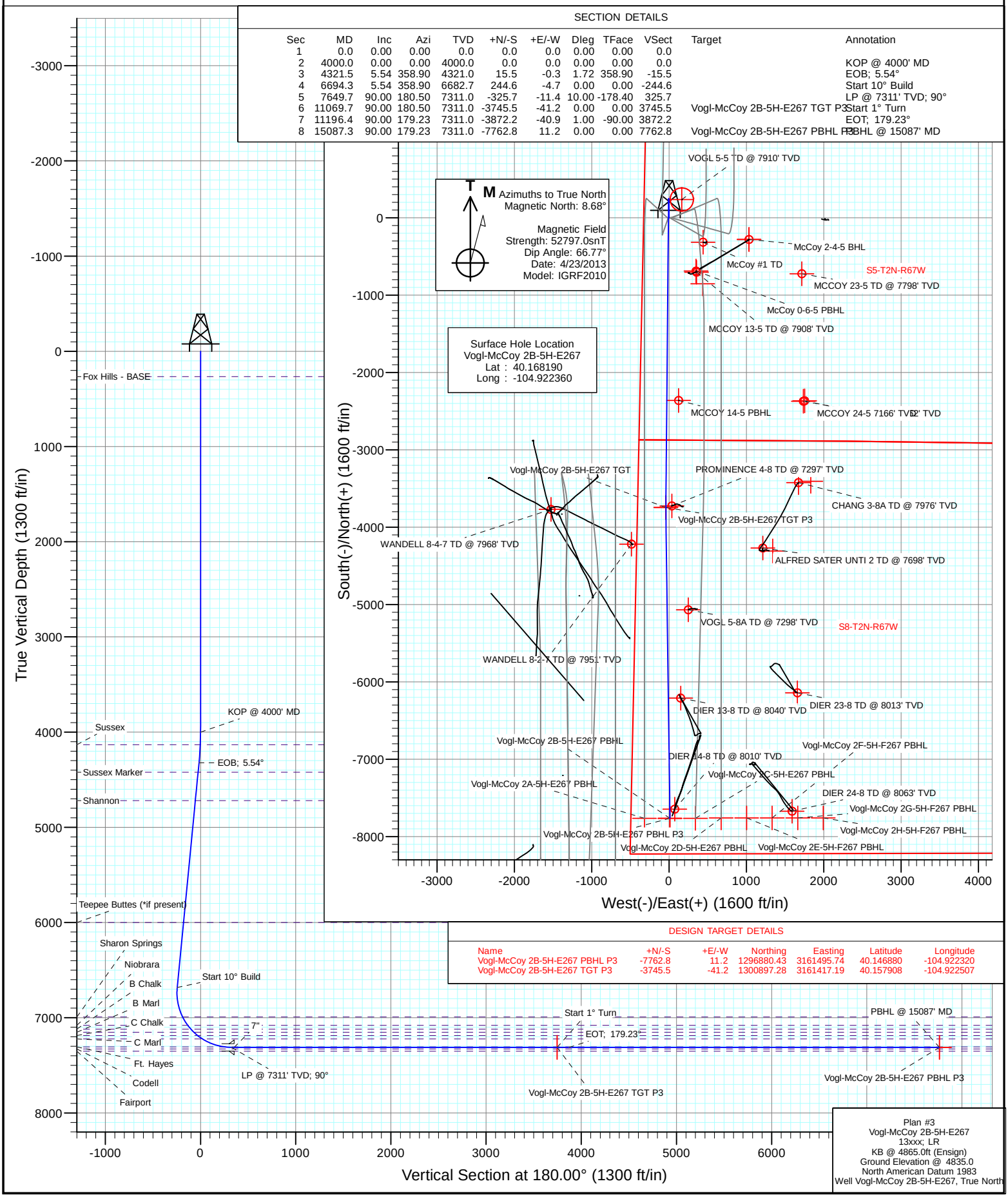
encana

Project: DJ Wattenberg
Site: S5-T2N-R67W (Vogl-McCoy)
Well: Vogl-McCoy 2B-5H-E267
Wellbore: Hz
Design: Plan #3

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	4000.0	0.00	0.00	4000.0	0.0	0.0	0.00	0.00	0.0		KOP @ 4000' MD
3	4321.5	5.54	358.90	4321.0	15.5	-0.3	1.72	358.90	-15.5		EOB; 5.54°
4	6694.3	5.54	358.90	6682.7	244.6	-4.7	0.00	0.00	-244.6		Start 10° Build
5	7649.7	90.00	180.50	7311.0	-325.7	-11.4	10.00	-178.40	325.7		LP @ 7311' TVD; 90°
6	11069.7	90.00	180.50	7311.0	-3745.5	-41.2	0.00	0.00	3745.5	Vogl-McCoy 2B-5H-E267 TGT P3	Start 1° Turn
7	11196.4	90.00	179.23	7311.0	-3872.2	-40.9	1.00	-90.00	3872.2		EOT; 179.23°
8	15087.3	90.00	179.23	7311.0	-7762.8	11.2	0.00	0.00	7762.8	Vogl-McCoy 2B-5H-E267 PBHL P3	PBHL @ 15087' MD



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Vogl-McCoy 2B-5H-E267 PBHL P3	-7762.8	11.2	1296880.43	3161495.74	40.146880	-104.922320
Vogl-McCoy 2B-5H-E267 TGT P3	-3745.5	-41.2	1300897.28	3161417.19	40.157908	-104.922507

Plan #3
Vogl-McCoy 2B-5H-E267
13xxx; LR
KB @ 4865.0ft (Ensign)
Ground Elevation @ 4835.0
North American Datum 1983
Well Vogl-McCoy 2B-5H-E267, True North

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Project DJ Wattenberg

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

Site 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 2B-5H-E267

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,304,643.00 ft	**Latitude:**	40.168190
	+E/-W	0.0 ft	**Easting:**	3,161,434.00 ft	**Longitude:**	-104.922360
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,835.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/23/2013	8.68	66.77	52,797

Design Plan #3

Audit Notes:

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

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	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	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,321.5	5.54	358.90	4,321.0	15.5	-0.3	1.72	1.72	0.00	358.90	
6,694.3	5.54	358.90	6,682.7	244.6	-4.7	0.00	0.00	0.00	0.00	
7,649.7	90.00	180.50	7,311.0	-325.7	-11.4	10.00	8.84	-18.67	-178.40	
11,069.7	90.00	180.50	7,311.0	-3,745.5	-41.2	0.00	0.00	0.00	0.00	Vogl-McCoy 2B-5H-E
11,196.4	90.00	179.23	7,311.0	-3,872.2	-40.9	1.00	0.00	-1.00	-90.00	
15,087.3	90.00	179.23	7,311.0	-7,762.8	11.2	0.00	0.00	0.00	0.00	Vogl-McCoy 2B-5H-E

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
265.0	0.00	0.00	265.0	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	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 4000' MD
4,100.0	1.72	358.90	4,100.0	1.5	0.0	-1.5	1.72	1.72	
4,131.0	2.26	358.90	4,131.0	2.6	0.0	-2.6	1.72	1.72	Sussex
4,200.0	3.45	358.90	4,199.9	6.0	-0.1	-6.0	1.72	1.72	
4,300.0	5.17	358.90	4,299.6	13.5	-0.3	-13.5	1.72	1.72	
4,321.5	5.54	358.90	4,321.0	15.5	-0.3	-15.5	1.72	1.72	EOB; 5.54°
4,400.0	5.54	358.90	4,399.1	23.1	-0.4	-23.1	0.00	0.00	
4,423.0	5.54	358.90	4,422.0	25.3	-0.5	-25.3	0.00	0.00	Sussex Marker
4,500.0	5.54	358.90	4,498.7	32.8	-0.6	-32.8	0.00	0.00	
4,600.0	5.54	358.90	4,598.2	42.4	-0.8	-42.4	0.00	0.00	
4,700.0	5.54	358.90	4,697.7	52.1	-1.0	-52.1	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,721.4	5.54	358.90	4,719.0	54.1	-1.0	-54.1	0.00	0.00	Shannon
4,800.0	5.54	358.90	4,797.3	61.7	-1.2	-61.7	0.00	0.00	
4,900.0	5.54	358.90	4,896.8	71.4	-1.4	-71.4	0.00	0.00	
5,000.0	5.54	358.90	4,996.3	81.0	-1.6	-81.0	0.00	0.00	
5,100.0	5.54	358.90	5,095.9	90.7	-1.7	-90.7	0.00	0.00	
5,200.0	5.54	358.90	5,195.4	100.3	-1.9	-100.3	0.00	0.00	
5,300.0	5.54	358.90	5,294.9	110.0	-2.1	-110.0	0.00	0.00	
5,400.0	5.54	358.90	5,394.5	119.6	-2.3	-119.6	0.00	0.00	
5,500.0	5.54	358.90	5,494.0	129.3	-2.5	-129.3	0.00	0.00	
5,600.0	5.54	358.90	5,593.5	138.9	-2.7	-138.9	0.00	0.00	
5,700.0	5.54	358.90	5,693.1	148.6	-2.8	-148.6	0.00	0.00	
5,800.0	5.54	358.90	5,792.6	158.3	-3.0	-158.3	0.00	0.00	
5,900.0	5.54	358.90	5,892.1	167.9	-3.2	-167.9	0.00	0.00	
6,000.0	5.54	358.90	5,991.7	177.6	-3.4	-177.6	0.00	0.00	
6,008.4	5.54	358.90	6,000.0	178.4	-3.4	-178.4	0.00	0.00	Teepee Buttes (*if present)
6,100.0	5.54	358.90	6,091.2	187.2	-3.6	-187.2	0.00	0.00	
6,200.0	5.54	358.90	6,190.7	196.9	-3.8	-196.9	0.00	0.00	
6,300.0	5.54	358.90	6,290.3	206.5	-4.0	-206.5	0.00	0.00	
6,400.0	5.54	358.90	6,389.8	216.2	-4.1	-216.2	0.00	0.00	
6,500.0	5.54	358.90	6,489.3	225.8	-4.3	-225.8	0.00	0.00	
6,600.0	5.54	358.90	6,588.9	235.5	-4.5	-235.5	0.00	0.00	
6,694.3	5.54	358.90	6,682.7	244.6	-4.7	-244.6	0.00	0.00	Start 10° Build
6,700.0	4.97	358.72	6,688.4	245.1	-4.7	-245.1	10.00	-10.00	
6,750.0	0.16	260.14	6,738.3	247.3	-4.8	-247.3	10.00	-9.63	
6,800.0	5.03	182.26	6,788.3	245.1	-5.0	-245.1	10.00	9.75	
6,850.0	10.03	181.38	6,837.8	238.5	-5.2	-238.5	10.00	10.00	
6,900.0	15.03	181.08	6,886.6	227.7	-5.4	-227.7	10.00	10.00	
6,950.0	20.03	180.92	6,934.3	212.6	-5.6	-212.6	10.00	10.00	
7,000.0	25.03	180.83	6,980.4	193.5	-5.9	-193.5	10.00	10.00	
7,011.7	26.20	180.81	6,991.0	188.4	-6.0	-188.4	10.00	10.00	Sharon Springs
7,050.0	30.03	180.77	7,024.8	170.4	-6.3	-170.4	10.00	10.00	
7,100.0	35.03	180.72	7,066.9	143.5	-6.6	-143.5	10.00	10.00	
7,116.1	36.64	180.71	7,080.0	134.0	-6.7	-134.0	10.00	10.00	Niobrara
7,150.0	40.03	180.68	7,106.5	113.0	-7.0	-113.0	10.00	10.00	
7,167.8	41.81	180.67	7,120.0	101.4	-7.1	-101.4	10.00	10.00	B Chalk
7,200.0	45.03	180.65	7,143.4	79.3	-7.4	-79.3	10.00	10.00	
7,213.8	46.41	180.65	7,153.0	69.4	-7.5	-69.4	10.00	10.00	B Marl
7,250.0	50.03	180.63	7,177.1	42.4	-7.8	-42.4	10.00	10.00	
7,264.0	51.43	180.62	7,186.0	31.6	-7.9	-31.6	10.00	10.00	C Chalk
7,300.0	55.03	180.61	7,207.5	2.7	-8.2	-2.7	10.00	10.00	
7,328.0	57.82	180.60	7,223.0	-20.6	-8.5	20.6	10.00	10.00	C Marl
7,350.0	60.03	180.59	7,234.4	-39.4	-8.7	39.4	10.00	10.00	
7,400.0	65.03	180.57	7,257.4	-83.8	-9.1	83.8	10.00	10.00	
7,450.0	70.03	180.56	7,276.5	-130.0	-9.6	130.0	10.00	10.00	
7,500.0	75.03	180.54	7,291.6	-177.7	-10.0	177.7	10.00	10.00	
7,550.0	80.03	180.53	7,302.3	-226.5	-10.5	226.5	10.00	10.00	
7,574.0	82.43	180.52	7,306.0	-250.1	-10.7	250.1	10.00	10.00	Ft. Hayes
7,600.0	85.03	180.51	7,308.8	-276.0	-10.9	276.0	10.00	10.00	
7,649.7	90.00	180.50	7,311.0	-325.7	-11.4	325.7	10.00	10.00	LP @ 7311' TVD; 90°
7,677.3	90.00	180.50	7,311.0	-353.2	-11.6	353.2	0.00	0.00	7"
7,700.0	90.00	180.50	7,311.0	-375.9	-11.8	375.9	0.00	0.00	
7,800.0	90.00	180.50	7,311.0	-475.9	-12.7	475.9	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
7,900.0	90.00	180.50	7,311.0	-575.9	-13.5	575.9	0.00	0.00	
8,000.0	90.00	180.50	7,311.0	-675.9	-14.4	675.9	0.00	0.00	
8,100.0	90.00	180.50	7,311.0	-775.9	-15.3	775.9	0.00	0.00	
8,200.0	90.00	180.50	7,311.0	-875.9	-16.2	875.9	0.00	0.00	
8,300.0	90.00	180.50	7,311.0	-975.9	-17.0	975.9	0.00	0.00	
8,400.0	90.00	180.50	7,311.0	-1,075.9	-17.9	1,075.9	0.00	0.00	
8,500.0	90.00	180.50	7,311.0	-1,175.9	-18.8	1,175.9	0.00	0.00	
8,600.0	90.00	180.50	7,311.0	-1,275.9	-19.6	1,275.9	0.00	0.00	
8,700.0	90.00	180.50	7,311.0	-1,375.9	-20.5	1,375.9	0.00	0.00	
8,800.0	90.00	180.50	7,311.0	-1,475.9	-21.4	1,475.9	0.00	0.00	
8,900.0	90.00	180.50	7,311.0	-1,575.9	-22.3	1,575.9	0.00	0.00	
9,000.0	90.00	180.50	7,311.0	-1,675.9	-23.1	1,675.9	0.00	0.00	
9,100.0	90.00	180.50	7,311.0	-1,775.9	-24.0	1,775.9	0.00	0.00	
9,200.0	90.00	180.50	7,311.0	-1,875.9	-24.9	1,875.9	0.00	0.00	
9,300.0	90.00	180.50	7,311.0	-1,975.9	-25.8	1,975.9	0.00	0.00	
9,400.0	90.00	180.50	7,311.0	-2,075.9	-26.6	2,075.9	0.00	0.00	
9,500.0	90.00	180.50	7,311.0	-2,175.9	-27.5	2,175.9	0.00	0.00	
9,600.0	90.00	180.50	7,311.0	-2,275.9	-28.4	2,275.9	0.00	0.00	
9,700.0	90.00	180.50	7,311.0	-2,375.9	-29.2	2,375.9	0.00	0.00	
9,800.0	90.00	180.50	7,311.0	-2,475.9	-30.1	2,475.9	0.00	0.00	
9,900.0	90.00	180.50	7,311.0	-2,575.9	-31.0	2,575.9	0.00	0.00	
10,000.0	90.00	180.50	7,311.0	-2,675.9	-31.9	2,675.9	0.00	0.00	
10,100.0	90.00	180.50	7,311.0	-2,775.9	-32.7	2,775.9	0.00	0.00	
10,200.0	90.00	180.50	7,311.0	-2,875.9	-33.6	2,875.9	0.00	0.00	
10,300.0	90.00	180.50	7,311.0	-2,975.8	-34.5	2,975.8	0.00	0.00	
10,400.0	90.00	180.50	7,311.0	-3,075.8	-35.4	3,075.8	0.00	0.00	
10,500.0	90.00	180.50	7,311.0	-3,175.8	-36.2	3,175.8	0.00	0.00	
10,600.0	90.00	180.50	7,311.0	-3,275.8	-37.1	3,275.8	0.00	0.00	
10,700.0	90.00	180.50	7,311.0	-3,375.8	-38.0	3,375.8	0.00	0.00	
10,800.0	90.00	180.50	7,311.0	-3,475.8	-38.8	3,475.8	0.00	0.00	
10,900.0	90.00	180.50	7,311.0	-3,575.8	-39.7	3,575.8	0.00	0.00	
11,000.0	90.00	180.50	7,311.0	-3,675.8	-40.6	3,675.8	0.00	0.00	
11,069.7	90.00	180.50	7,311.0	-3,745.5	-41.2	3,745.5	0.00	0.00	Start 1° Turn
11,100.0	90.00	180.20	7,311.0	-3,775.8	-41.4	3,775.8	1.00	0.00	
11,196.4	90.00	179.23	7,311.0	-3,872.2	-40.9	3,872.2	1.00	0.00	EOT; 179.23°
11,200.0	90.00	179.23	7,311.0	-3,875.8	-40.9	3,875.8	0.00	0.00	
11,300.0	90.00	179.23	7,311.0	-3,975.8	-39.5	3,975.8	0.00	0.00	
11,400.0	90.00	179.23	7,311.0	-4,075.8	-38.2	4,075.8	0.00	0.00	
11,500.0	90.00	179.23	7,311.0	-4,175.8	-36.8	4,175.8	0.00	0.00	
11,600.0	90.00	179.23	7,311.0	-4,275.8	-35.5	4,275.8	0.00	0.00	
11,700.0	90.00	179.23	7,311.0	-4,375.8	-34.2	4,375.8	0.00	0.00	
11,800.0	90.00	179.23	7,311.0	-4,475.8	-32.8	4,475.8	0.00	0.00	
11,900.0	90.00	179.23	7,311.0	-4,575.8	-31.5	4,575.8	0.00	0.00	
12,000.0	90.00	179.23	7,311.0	-4,675.7	-30.1	4,675.7	0.00	0.00	
12,100.0	90.00	179.23	7,311.0	-4,775.7	-28.8	4,775.7	0.00	0.00	
12,200.0	90.00	179.23	7,311.0	-4,875.7	-27.5	4,875.7	0.00	0.00	
12,300.0	90.00	179.23	7,311.0	-4,975.7	-26.1	4,975.7	0.00	0.00	
12,400.0	90.00	179.23	7,311.0	-5,075.7	-24.8	5,075.7	0.00	0.00	
12,500.0	90.00	179.23	7,311.0	-5,175.7	-23.5	5,175.7	0.00	0.00	
12,600.0	90.00	179.23	7,311.0	-5,275.7	-22.1	5,275.7	0.00	0.00	
12,700.0	90.00	179.23	7,311.0	-5,375.7	-20.8	5,375.7	0.00	0.00	
12,800.0	90.00	179.23	7,311.0	-5,475.7	-19.4	5,475.7	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
12,900.0	90.00	179.23	7,311.0	-5,575.7	-18.1	5,575.7	0.00	0.00	
13,000.0	90.00	179.23	7,311.0	-5,675.7	-16.8	5,675.7	0.00	0.00	
13,100.0	90.00	179.23	7,311.0	-5,775.6	-15.4	5,775.6	0.00	0.00	
13,200.0	90.00	179.23	7,311.0	-5,875.6	-14.1	5,875.6	0.00	0.00	
13,300.0	90.00	179.23	7,311.0	-5,975.6	-12.7	5,975.6	0.00	0.00	
13,400.0	90.00	179.23	7,311.0	-6,075.6	-11.4	6,075.6	0.00	0.00	
13,500.0	90.00	179.23	7,311.0	-6,175.6	-10.1	6,175.6	0.00	0.00	
13,600.0	90.00	179.23	7,311.0	-6,275.6	-8.7	6,275.6	0.00	0.00	
13,700.0	90.00	179.23	7,311.0	-6,375.6	-7.4	6,375.6	0.00	0.00	
13,800.0	90.00	179.23	7,311.0	-6,475.6	-6.1	6,475.6	0.00	0.00	
13,900.0	90.00	179.23	7,311.0	-6,575.6	-4.7	6,575.6	0.00	0.00	
14,000.0	90.00	179.23	7,311.0	-6,675.6	-3.4	6,675.6	0.00	0.00	
14,100.0	90.00	179.23	7,311.0	-6,775.6	-2.0	6,775.6	0.00	0.00	
14,200.0	90.00	179.23	7,311.0	-6,875.5	-0.7	6,875.5	0.00	0.00	
14,300.0	90.00	179.23	7,311.0	-6,975.5	0.6	6,975.5	0.00	0.00	
14,400.0	90.00	179.23	7,311.0	-7,075.5	2.0	7,075.5	0.00	0.00	
14,500.0	90.00	179.23	7,311.0	-7,175.5	3.3	7,175.5	0.00	0.00	
14,600.0	90.00	179.23	7,311.0	-7,275.5	4.7	7,275.5	0.00	0.00	
14,700.0	90.00	179.23	7,311.0	-7,375.5	6.0	7,375.5	0.00	0.00	
14,800.0	90.00	179.23	7,311.0	-7,475.5	7.3	7,475.5	0.00	0.00	
14,900.0	90.00	179.23	7,311.0	-7,575.5	8.7	7,575.5	0.00	0.00	
15,000.0	90.00	179.23	7,311.0	-7,675.5	10.0	7,675.5	0.00	0.00	
15,087.3	90.00	179.23	7,311.0	-7,762.8	11.2	7,762.8	0.00	0.00	PBHL @ 15087' MD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Vogl-McCoy 2B-5H-E26	0.00	0.00	7,338.0	-3,745.5	-41.2	1,300,897.28	3,161,417.19	40.157908	-104.922507
- plan misses target center by 27.0ft at 11069.7ft MD (7311.0 TVD, -3745.5 N, -41.2 E)									
- Point									
Vogl-McCoy 2B-5H-E26	0.00	0.00	7,311.0	-3,745.5	-41.2	1,300,897.28	3,161,417.19	40.157908	-104.922507
- plan hits target center									
- Point									
Vogl-McCoy 2B-5H-E26	0.00	0.00	7,338.0	-7,762.8	11.2	1,296,880.43	3,161,495.74	40.146880	-104.922320
- plan misses target center by 27.0ft at 15087.3ft MD (7311.0 TVD, -7762.8 N, 11.2 E)									
- Point									
Vogl-McCoy 2B-5H-E26	0.00	0.00	7,311.0	-7,762.8	11.2	1,296,880.43	3,161,495.74	40.146880	-104.922320
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
7,677.3	7,311.0	7"	0.000	0.000

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site:	S5-T2N-R67W (Vogl-McCoy)	**North Reference:**	True
Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #3		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
265.0	265.0	Fox Hills - BASE			
4,131.0	4,131.0	Sussex			
4,423.0	4,422.0	Sussex Marker			
4,721.4	4,719.0	Shannon			
6,008.4	6,000.0	Teepee Buttes (*if present)			
7,011.7	6,991.0	Sharon Springs			
7,116.1	7,080.0	Niobrara			
7,167.8	7,120.0	B Chalk			
7,213.8	7,153.0	B Marl			
7,264.0	7,186.0	C Chalk			
7,328.0	7,223.0	C Marl			
7,574.0	7,306.0	Ft. Hayes			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
4,000.0	4,000.0	0.0	0.0	KOP @ 4000' MD
4,321.5	4,321.0	15.5	-0.3	EOB; 5.54°
6,694.3	6,682.7	244.6	-4.7	Start 10° Build
7,649.7	7,311.0	-325.7	-11.4	LP @ 7311' TVD; 90°
11,069.7	7,311.0	-3,745.5	-41.2	Start 1° Turn
11,196.4	7,311.0	-3,872.2	-40.9	EOT; 179.23°
15,087.3	7,311.0	-7,762.8	11.2	PBHL @ 15087' MD

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S5-T2N-R67W (Vogl-McCoy)
Vogl-McCoy 2B-5H-E267
Hz
Plan #3

Anticollision Report

12 February, 2014

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Reference	Plan #3

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,550.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 2/12/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	15,087.3	Plan #3 (Hz)	MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S18-T2N-R67W (Kugel)						
Kugel 1D-18H-H267 - Hz - Plan #1						Out of range
Kugel 1E-18H-H267 - Hz - Plan #1	11,368.6	13,700.0	1,291.1	1,104.1	6.904	CC
Kugel 1E-18H-H267 - Hz - Plan #1	11,400.0	13,676.5	1,291.2	1,104.0	6.900	ES
Kugel 1E-18H-H267 - Hz - Plan #1	11,500.0	13,597.2	1,292.7	1,105.3	6.896	SF
Kugel 1E-18H-H267 - Hz - Plan #2	11,139.2	13,941.9	1,273.4	1,086.2	6.802	CC, ES
Kugel 1E-18H-H267 - Hz - Plan #2	11,200.0	13,900.0	1,274.3	1,086.8	6.795	SF
Kugel 1F-18H-H267 - Hz - Plan #1	12,078.8	12,776.7	895.4	710.2	4.837	CC
Kugel 1F-18H-H267 - Hz - Plan #1	12,100.0	12,758.3	895.4	710.2	4.836	ES
Kugel 1F-18H-H267 - Hz - Plan #1	12,200.0	12,671.7	896.5	711.1	4.835	SF
Kugel 1G-18H-H267 - Hz - Plan #1	11,100.0	13,982.3	656.7	470.4	3.525	SF
Kugel 1G-18H-H267 - Hz - Plan #1	11,119.5	13,962.8	656.7	470.4	3.525	CC, ES
KUGEL 41-18 (EXISTING) - ENCANA WELL - ENCANA	15,087.3	7,371.0	1,316.2	1,164.9	8.702	CC, ES, SF
WANDELL 1 (EXISTING) - ENCANA WELL - NO SURVE	11,148.5	7,336.0	1,349.8	1,267.1	16.324	CC, ES
WANDELL 1 (EXISTING) - ENCANA WELL - NO SURVE	11,500.0	7,336.0	1,397.4	1,308.7	15.746	SF
WANDELL 31-7 (EXISTING) - ENCANA WELL - SURVEY						Out of range
WANDELL 41-7 (EXISTING) - ENCANA WELL - SURVEY	10,663.1	7,400.3	887.2	810.0	11.496	CC, ES
WANDELL 41-7 (EXISTING) - ENCANA WELL - SURVEY	10,800.0	7,397.2	897.7	818.2	11.290	SF
WANDELL 42-7 (EXISTING) - ENCANA WELL - SURVEY	12,222.7	7,498.9	962.5	850.9	8.624	CC, ES
WANDELL 42-7 (EXISTING) - ENCANA WELL - SURVEY	12,400.0	7,497.8	978.7	864.0	8.534	SF
WANDELL 43-7 (EXISTING) - ENCANA WELL - PLAN O	13,516.0	7,744.0	1,128.8	990.8	8.179	CC, ES
WANDELL 43-7 (EXISTING) - ENCANA WELL - PLAN O	13,700.0	7,762.8	1,143.5	1,002.5	8.111	SF
WANDELL 6-0-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WANDELL 6-4-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WANDELL 6-8-7 (EXISTING) - ENCANA WELL - SURVE						Out of range
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - NO SU	11,083.8	7,338.0	1,490.4	1,408.8	18.269	CC
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - NO SU	11,100.0	7,338.0	1,490.5	1,408.7	18.208	ES
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - NO SU	11,400.0	7,338.0	1,528.6	1,441.6	17.566	SF
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - NO SU	11,099.6	7,339.0	1,485.3	1,403.4	18.145	CC
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - NO SU	11,100.0	7,339.0	1,485.3	1,403.4	18.144	ES
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - NO SU	11,500.0	7,339.0	1,544.0	1,455.3	17.397	SF
WANDELL E UNIT 1 (EXISTING) - ENCANA WELL - NO	14,515.1	7,361.0	1,381.8	1,240.6	9.783	CC, ES
WANDELL E UNIT 1 (EXISTING) - ENCANA WELL - NO	14,800.0	7,361.0	1,410.9	1,264.7	9.649	SF
WANDELL V 7-8 (EXISTING) - GERRITY OIL WELL - NO	12,195.5	7,345.0	1,136.5	1,035.7	11.273	CC
WANDELL V 7-8 (EXISTING) - GERRITY OIL WELL - NO	12,200.0	7,345.0	1,136.5	1,035.6	11.264	ES
WANDELL V 7-8 (EXISTING) - GERRITY OIL WELL - NO	12,400.0	7,345.0	1,154.7	1,050.4	11.064	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S5-T2N-R67W (Vogl-McCoy)						
ALFRED SATER UNIT 2 (EXISTING) - KMG WELL - KMG	11,618.9	7,302.7	1,243.7	1,159.3	14.741	CC, ES
ALFRED SATER UNIT 2 (EXISTING) - KMG WELL - KMG	11,900.0	7,296.4	1,275.0	1,185.8	14.290	SF
CHENG 3-8A (EXISTING) - KMG WELL - SURVEYS						Out of range
DIER 13-8 (EXISTING) - ENCANA WELL - Plan #1	13,681.9	7,483.1	247.2	121.2	1.962	CC
DIER 13-8 (EXISTING) - ENCANA WELL - Plan #1	13,700.0	7,477.4	247.8	121.1	1.955	ES, SF
DIER 13-8 (EXISTING) - ENCANA WELL - SURVEYS	13,696.4	7,466.4	237.3	110.6	1.874	CC
DIER 13-8 (EXISTING) - ENCANA WELL - SURVEYS	13,700.0	7,465.0	237.3	110.5	1.872	ES, SF
DIER 14-8 (EXISTING) - ENCANA WELL - Plan #1	14,850.4	7,566.0	106.5	-46.4	0.697	Level 1, CC, ES, SF
DIER 14-8 (EXISTING) - ENCANA WELL - Plan #2	14,960.8	7,576.0	64.8	-92.5	0.412	Level 1, CC, ES, SF
DIER 14-8 (EXISTING) - ENCANA WELL - SURVEYS	14,936.8	7,532.7	69.9	-86.5	0.447	Level 1, CC, ES, SF
DIER 23-8 (EXISTING) - ENCANA WELL - Plan #1						Out of range
DIER 23-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 24-8 (EXISTING) - ENCANA WELL - Plan #1						Out of range
DIER 24-8 (EXISTING) - ENCANA WELL - SURVEYS	14,908.7	7,164.9	1,518.0	1,370.6	10.295	CC
DIER 24-8 (EXISTING) - ENCANA WELL - SURVEYS	15,000.0	7,206.7	1,520.4	1,370.4	10.137	ES
DIER 24-8 (EXISTING) - ENCANA WELL - SURVEYS	15,087.3	7,241.4	1,527.0	1,374.8	10.032	SF
DIER 4-8 (EXISTING) - ENCANA WELL - SURVEYS	14,403.6	7,381.8	1,043.2	903.9	7.487	CC, ES
DIER 4-8 (EXISTING) - ENCANA WELL - SURVEYS	14,500.0	7,381.6	1,047.6	906.6	7.429	SF
MCCOY #1 (EXISTING) - ENCANA WELL - SURVEYS	4,059.4	4,079.5	555.4	541.3	39.276	CC
MCCOY #1 (EXISTING) - ENCANA WELL - SURVEYS	4,100.0	4,120.4	555.5	541.3	38.895	ES
MCCOY #1 (EXISTING) - ENCANA WELL - SURVEYS	5,300.0	5,315.3	613.3	594.7	33.043	SF
MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURV	8,009.4	7,404.0	363.8	332.3	11.542	CC, ES
MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURV	8,100.0	7,404.0	375.0	342.2	11.461	SF
MCCOY 13-5 (EXISTING) - ENCANA WELL - SURVEYS	8,034.6	7,289.2	270.4	238.7	8.552	CC, ES, SF
MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURVE	9,684.1	7,315.0	152.9	95.3	2.654	CC, ES, SF
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - Plan #1	1,201.0	1,200.0	775.6	771.4	188.614	CC
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - Plan #1	1,600.0	1,596.4	776.1	770.5	139.455	ES
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - Plan #1	8,100.0	7,365.2	1,160.4	1,126.1	33.804	SF
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS	1,022.9	1,022.2	767.3	763.7	218.259	CC
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS	1,100.0	1,093.7	767.5	763.7	202.227	ES
MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS	8,100.0	7,367.0	1,158.3	1,124.0	33.718	SF
PROMINENCE 4-8 (EXISTING) - KMG WELL - GYRO	11,048.1	7,300.0	86.2	18.2	1.268	Level 3, CC, ES, SF
VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS	6,580.2	6,544.1	169.4	145.8	7.181	CC
VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS	6,850.0	6,812.8	170.0	145.6	6.944	ES
VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS	6,900.0	6,861.6	170.5	145.9	6.936	SF
VOGL 5-8A (EXISTING) - KMG WELL - GYRO	12,395.6	7,300.0	277.7	174.9	2.703	CC
VOGL 5-8A (EXISTING) - KMG WELL - GYRO	12,400.0	7,300.0	277.7	174.9	2.701	ES, SF
Vogl-Geist 2A-5H-E267 - Hz - Plan #2	366.3	367.3	11.2	10.0	9.508	CC
Vogl-Geist 2A-5H-E267 - Hz - Plan #2	400.0	401.0	11.2	9.9	8.643	ES
Vogl-Geist 2A-5H-E267 - Hz - Plan #2	7,265.1	7,277.5	80.4	55.1	3.175	SF
Vogl-Geist 2B-5H-E267 - Hz - Plan #2	566.3	567.3	8.4	6.5	4.474	CC
Vogl-Geist 2B-5H-E267 - Hz - Plan #2	600.0	601.0	8.4	6.4	4.210	ES
Vogl-Geist 2B-5H-E267 - Hz - Plan #2	700.0	700.9	9.2	6.8	3.917	SF
Vogl-Geist 2C-5H-E267 - Hz - Plan #2	266.3	267.3	27.9	27.1	33.805	CC
Vogl-Geist 2C-5H-E267 - Hz - Plan #2	300.0	301.0	27.9	27.0	29.597	ES
Vogl-Geist 2C-5H-E267 - Hz - Plan #2	700.0	698.5	41.6	39.2	17.781	SF
Vogl-McCoy 2A-5H-E267 - Hz - Plan #1	200.0	200.0	19.6	19.0	32.966	CC, ES
Vogl-McCoy 2A-5H-E267 - Hz - Plan #1	15,087.3	14,908.6	376.3	132.5	1.544	SF
Vogl-McCoy 2C-5H-E267 - Hz - Plan #2	466.3	467.3	19.6	18.0	12.829	CC
Vogl-McCoy 2C-5H-E267 - Hz - Plan #2	500.0	501.0	19.6	17.9	11.911	ES
Vogl-McCoy 2C-5H-E267 - Hz - Plan #2	15,087.3	14,779.1	376.7	133.2	1.547	SF
Vogl-McCoy 2D-5H-E267 - Hz - Plan #1	166.3	167.3	39.1	38.6	81.915	CC
Vogl-McCoy 2D-5H-E267 - Hz - Plan #1	200.0	201.0	39.1	38.5	65.740	ES

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S5-T2N-R67W (Vogl-McCoy)						
Vogl-McCoy 2D-5H-E267 - Hz - Plan #1	15,087.3	15,135.9	663.1	386.4	2.396	SF
Vogl-McCoy 2E-5H-F267 - Hz - SURVEYS						Out of range
Vogl-McCoy 2F-5H-F267 - Hz - SURVEYS						Out of range
Vogl-McCoy 2G-5H-F267 - Hz - SURVEYS						Out of range
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - SURVE	11,538.8	7,502.1	443.3	351.0	4.805	CC, ES
WANDELL 8-2-7 (EXISTING) - ENCANA WELL - SURVE	11,600.0	7,501.9	447.5	354.2	4.795	SF
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - SURVE	12,748.2	7,745.4	492.0	361.7	3.776	CC, ES
WANDELL 8-4-7 (EXISTING) - ENCANA WELL - SURVE	12,800.0	7,745.2	494.7	363.5	3.771	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - Kugel 1E-18H-H267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,900.0	7,311.0	14,465.1	7,486.0	48.5	127.1	93.38	-3,299.6	-1,392.0	1,543.6	1,368.5	175.05	8.818	
10,000.0	7,311.0	14,465.1	7,486.0	50.2	127.1	93.38	-3,299.6	-1,392.0	1,498.5	1,321.7	176.74	8.478	
10,100.0	7,311.0	14,465.1	7,486.0	51.9	127.1	93.38	-3,299.6	-1,392.0	1,458.9	1,280.4	178.44	8.176	
10,200.0	7,311.0	14,465.1	7,486.0	53.6	127.1	93.38	-3,299.6	-1,392.0	1,425.2	1,245.1	180.14	7.912	
10,300.0	7,311.0	14,465.1	7,486.0	55.3	127.1	93.38	-3,299.6	-1,392.0	1,397.9	1,216.0	181.84	7.687	
10,400.0	7,311.0	14,465.1	7,486.0	57.0	127.1	93.38	-3,299.6	-1,392.0	1,377.3	1,193.7	183.55	7.504	
10,500.0	7,311.0	14,443.1	7,486.0	58.7	126.7	93.39	-3,321.5	-1,389.6	1,363.6	1,178.7	184.87	7.376	
10,600.0	7,311.0	14,343.8	7,486.0	60.5	125.0	93.42	-3,420.3	-1,379.0	1,352.0	1,167.2	184.86	7.314	
10,700.0	7,311.0	14,244.5	7,486.0	62.2	123.3	93.44	-3,519.0	-1,368.4	1,340.5	1,155.6	184.84	7.252	
10,800.0	7,311.0	14,145.1	7,486.0	63.9	121.5	93.47	-3,617.8	-1,357.7	1,328.9	1,144.1	184.83	7.190	
10,900.0	7,311.0	14,050.1	7,486.0	65.6	119.9	93.50	-3,712.3	-1,347.6	1,317.4	1,132.5	184.90	7.125	
11,000.0	7,311.0	13,975.8	7,486.0	67.3	118.6	93.52	-3,786.2	-1,340.6	1,307.1	1,121.8	185.32	7.053	
11,069.7	7,311.0	13,923.9	7,486.0	68.5	117.7	93.54	-3,838.0	-1,336.5	1,301.1	1,115.5	185.62	7.009	
11,100.0	7,311.0	13,900.0	7,486.0	69.1	117.3	93.54	-3,861.8	-1,334.9	1,298.9	1,113.1	185.76	6.992	
11,196.4	7,311.0	13,829.1	7,486.0	70.7	116.0	93.55	-3,932.6	-1,331.0	1,293.9	1,107.7	186.27	6.947	
11,200.0	7,311.0	13,826.5	7,486.0	70.8	116.0	93.55	-3,935.3	-1,330.8	1,293.8	1,107.5	186.29	6.945	
11,300.0	7,311.0	13,751.5	7,486.0	72.5	114.7	93.55	-4,010.2	-1,328.1	1,291.5	1,104.8	186.71	6.917	
11,368.6	7,311.0	13,700.0	7,486.0	73.7	113.8	93.55	-4,061.7	-1,327.1	1,291.1	1,104.1	186.99	6.904	CC
11,400.0	7,311.0	13,676.5	7,486.0	74.2	113.4	93.55	-4,085.1	-1,326.8	1,291.2	1,104.0	187.12	6.900	ES
11,500.0	7,311.0	13,597.2	7,486.0	76.0	112.0	93.55	-4,164.5	-1,327.0	1,292.7	1,105.3	187.47	6.896	SF
11,600.0	7,311.0	13,497.2	7,486.0	77.7	110.2	93.54	-4,264.4	-1,327.9	1,294.9	1,107.5	187.46	6.908	
11,700.0	7,311.0	13,397.2	7,486.0	79.4	108.5	93.54	-4,364.4	-1,328.8	1,297.1	1,109.7	187.45	6.920	
11,800.0	7,311.0	13,297.3	7,486.0	81.2	106.8	93.53	-4,464.4	-1,329.7	1,299.4	1,111.9	187.44	6.932	
11,900.0	7,311.0	13,197.3	7,486.0	82.9	105.0	93.52	-4,564.4	-1,330.5	1,301.6	1,114.1	187.44	6.944	
12,000.0	7,311.0	13,097.3	7,486.0	84.6	103.3	93.52	-4,664.3	-1,331.4	1,303.8	1,116.3	187.43	6.956	
12,100.0	7,311.0	12,992.2	7,486.0	86.4	101.5	93.51	-4,769.4	-1,332.3	1,306.0	1,118.6	187.34	6.971	
12,200.0	7,311.0	12,870.0	7,486.0	88.1	99.4	93.51	-4,891.6	-1,331.6	1,306.7	1,119.8	186.95	6.990	
12,300.0	7,311.0	12,770.0	7,486.0	89.8	97.6	93.51	-4,991.6	-1,330.4	1,306.8	1,119.9	186.95	6.990	
12,400.0	7,311.0	12,670.0	7,486.0	91.6	95.9	93.51	-5,091.6	-1,329.2	1,307.0	1,120.0	186.95	6.991	
12,500.0	7,311.0	12,570.0	7,486.0	93.3	94.1	93.51	-5,191.6	-1,328.0	1,307.1	1,120.1	186.95	6.992	
12,600.0	7,311.0	12,470.0	7,486.0	95.0	92.4	93.51	-5,291.6	-1,326.8	1,307.2	1,120.2	186.95	6.992	
12,700.0	7,311.0	12,370.0	7,486.0	96.8	90.7	93.51	-5,391.6	-1,325.5	1,307.3	1,120.4	186.95	6.993	
12,800.0	7,311.0	12,270.0	7,486.0	98.5	88.9	93.51	-5,491.6	-1,324.3	1,307.4	1,120.5	186.95	6.993	
12,900.0	7,311.0	12,170.0	7,486.0	100.3	87.2	93.51	-5,591.6	-1,323.1	1,307.6	1,120.6	186.96	6.994	
13,000.0	7,311.0	12,070.0	7,486.0	102.0	85.5	93.51	-5,691.5	-1,321.9	1,307.7	1,120.7	186.96	6.994	
13,100.0	7,311.0	11,970.0	7,486.0	103.7	83.7	93.51	-5,791.5	-1,320.7	1,307.8	1,120.8	186.97	6.995	
13,200.0	7,311.0	11,870.0	7,486.0	105.5	82.0	93.51	-5,891.5	-1,319.5	1,307.9	1,120.9	186.98	6.995	
13,300.0	7,311.0	11,770.0	7,486.0	107.2	80.3	93.51	-5,991.5	-1,318.2	1,308.0	1,121.1	186.99	6.995	
13,400.0	7,311.0	11,670.0	7,486.0	109.0	78.6	93.51	-6,091.5	-1,317.0	1,308.2	1,121.2	187.00	6.996	
13,500.0	7,311.0	11,570.0	7,486.0	110.7	76.8	93.51	-6,191.5	-1,315.8	1,308.3	1,121.3	187.01	6.996	
13,600.0	7,311.0	11,470.0	7,486.0	112.4	75.1	93.51	-6,291.5	-1,314.6	1,308.4	1,121.4	187.02	6.996	
13,700.0	7,311.0	11,370.0	7,486.0	114.2	73.4	93.51	-6,391.5	-1,313.4	1,308.5	1,121.5	187.04	6.996	
13,800.0	7,311.0	11,270.0	7,486.0	115.9	71.7	93.50	-6,491.5	-1,312.2	1,308.6	1,121.6	187.05	6.996	
13,900.0	7,311.0	11,170.0	7,486.0	117.7	69.9	93.50	-6,591.5	-1,310.9	1,308.8	1,121.7	187.07	6.996	
14,000.0	7,311.0	11,070.0	7,486.0	119.4	68.2	93.50	-6,691.5	-1,309.7	1,308.9	1,121.8	187.09	6.996	
14,100.0	7,311.0	10,970.0	7,486.0	121.2	66.5	93.50	-6,791.5	-1,308.5	1,309.0	1,121.9	187.11	6.996	
14,200.0	7,311.0	10,870.0	7,486.0	122.9	64.8	93.50	-6,891.5	-1,307.3	1,309.1	1,122.0	187.14	6.995	
14,300.0	7,311.0	10,770.0	7,486.0	124.7	63.1	93.50	-6,991.5	-1,306.1	1,309.2	1,122.1	187.16	6.995	
14,400.0	7,311.0	10,670.0	7,486.0	126.4	61.4	93.50	-7,091.4	-1,304.8	1,309.4	1,122.2	187.19	6.995	
14,500.0	7,311.0	10,570.0	7,486.0	128.1	59.7	93.50	-7,191.4	-1,303.6	1,309.5	1,122.3	187.22	6.994	
14,600.0	7,311.0	10,470.0	7,486.0	129.9	58.0	93.50	-7,291.4	-1,302.4	1,309.6	1,122.4	187.26	6.994	
14,700.0	7,311.0	10,370.0	7,486.0	131.6	56.2	93.50	-7,391.4	-1,301.2	1,309.7	1,122.4	187.29	6.993	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - Kugel 1E-18H-H267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,800.0	7,311.0	10,270.0	7,486.0	133.4	54.5	93.50	-7,491.4	-1,300.0	1,309.9	1,122.5	187.33	6.992	
14,900.0	7,311.0	10,170.0	7,486.0	135.1	52.9	93.50	-7,591.4	-1,298.8	1,310.0	1,122.6	187.37	6.991	
15,000.0	7,311.0	10,070.0	7,486.0	136.9	51.2	93.50	-7,691.4	-1,297.5	1,310.1	1,122.7	187.42	6.990	
15,087.3	7,311.0	9,982.7	7,486.0	138.4	49.7	93.50	-7,778.7	-1,296.5	1,310.2	1,122.7	187.46	6.989	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - Kugel 1E-18H-H267 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,900.0	7,311.0	14,469.5	7,486.0	48.5	127.1	93.38	-3,300.3	-1,391.9	1,543.8	1,368.8	175.02	8.821	
10,000.0	7,311.0	14,469.5	7,486.0	50.2	127.1	93.38	-3,300.3	-1,391.9	1,498.7	1,322.0	176.71	8.481	
10,100.0	7,311.0	14,469.5	7,486.0	51.9	127.1	93.38	-3,300.3	-1,391.9	1,459.0	1,280.6	178.41	8.178	
10,200.0	7,311.0	14,469.5	7,486.0	53.6	127.1	93.38	-3,300.3	-1,391.9	1,425.3	1,245.2	180.11	7.914	
10,300.0	7,311.0	14,417.7	7,486.0	55.3	126.2	93.42	-3,350.1	-1,377.4	1,396.4	1,215.5	180.94	7.718	
10,400.0	7,311.0	14,363.4	7,486.0	57.0	125.3	93.45	-3,402.6	-1,363.6	1,370.2	1,188.5	181.72	7.540	
10,500.0	7,311.0	14,300.0	7,486.0	58.7	124.2	93.49	-3,464.4	-1,349.6	1,347.1	1,164.7	182.35	7.387	
10,600.0	7,311.0	14,252.3	7,486.0	60.5	123.4	93.52	-3,511.2	-1,340.5	1,326.9	1,143.7	183.24	7.241	
10,700.0	7,311.0	14,200.0	7,486.0	62.2	122.5	93.54	-3,562.9	-1,332.0	1,309.9	1,125.8	184.06	7.117	
10,800.0	7,311.0	14,138.6	7,486.0	63.9	121.4	93.57	-3,623.7	-1,323.9	1,296.0	1,111.3	184.71	7.016	
10,900.0	7,311.0	14,100.0	7,486.0	65.6	120.7	93.58	-3,662.1	-1,319.9	1,285.6	1,099.8	185.76	6.921	
11,000.0	7,311.0	14,023.0	7,486.0	67.3	119.4	93.60	-3,738.9	-1,314.4	1,277.9	1,091.8	186.14	6.865	
11,069.7	7,311.0	14,000.0	7,486.0	68.5	119.0	93.60	-3,761.9	-1,313.4	1,274.8	1,087.9	186.94	6.820	
11,100.0	7,311.0	13,964.8	7,486.0	69.1	118.4	93.60	-3,797.1	-1,312.5	1,273.8	1,086.9	186.88	6.816	
11,139.2	7,311.0	13,941.9	7,486.0	69.7	118.0	93.60	-3,819.9	-1,312.3	1,273.4	1,086.2	187.20	6.802	CC, ES
11,196.4	7,311.0	13,900.0	7,486.0	70.7	117.2	93.60	-3,861.9	-1,312.6	1,274.2	1,086.8	187.49	6.796	
11,200.0	7,311.0	13,900.0	7,486.0	70.8	117.2	93.60	-3,861.9	-1,312.6	1,274.3	1,086.8	187.55	6.795	SF
11,300.0	7,311.0	13,815.0	7,486.0	72.5	115.8	93.59	-3,946.8	-1,314.5	1,277.8	1,090.0	187.80	6.804	
11,400.0	7,311.0	13,715.1	7,486.0	74.2	114.0	93.58	-4,046.7	-1,316.8	1,281.4	1,093.6	187.79	6.824	
11,500.0	7,311.0	13,615.2	7,486.0	76.0	112.3	93.57	-4,146.6	-1,319.1	1,285.0	1,097.3	187.78	6.843	
11,600.0	7,311.0	13,515.2	7,486.0	77.7	110.6	93.56	-4,246.5	-1,321.3	1,288.6	1,100.9	187.77	6.863	
11,700.0	7,311.0	13,415.3	7,486.0	79.4	108.8	93.55	-4,346.5	-1,323.6	1,292.2	1,104.5	187.76	6.882	
11,800.0	7,311.0	13,315.3	7,486.0	81.2	107.1	93.54	-4,446.4	-1,325.9	1,295.9	1,108.1	187.76	6.902	
11,900.0	7,311.0	13,215.4	7,486.0	82.9	105.3	93.53	-4,546.3	-1,328.1	1,299.5	1,111.7	187.75	6.921	
12,000.0	7,311.0	13,115.5	7,486.0	84.6	103.6	93.52	-4,646.2	-1,330.4	1,303.1	1,115.3	187.75	6.940	
12,100.0	7,311.0	12,992.2	7,486.0	86.4	101.5	93.51	-4,769.4	-1,332.3	1,306.0	1,118.6	187.34	6.971	
12,200.0	7,311.0	12,870.0	7,486.0	88.1	99.4	93.51	-4,891.6	-1,331.6	1,306.7	1,119.8	186.95	6.990	
12,300.0	7,311.0	12,770.0	7,486.0	89.8	97.6	93.51	-4,991.6	-1,330.4	1,306.8	1,119.9	186.95	6.990	
12,400.0	7,311.0	12,670.0	7,486.0	91.6	95.9	93.51	-5,091.6	-1,329.2	1,307.0	1,120.0	186.95	6.991	
12,500.0	7,311.0	12,570.0	7,486.0	93.3	94.1	93.51	-5,191.6	-1,328.0	1,307.1	1,120.1	186.95	6.992	
12,600.0	7,311.0	12,470.0	7,486.0	95.0	92.4	93.51	-5,291.6	-1,326.8	1,307.2	1,120.2	186.95	6.992	
12,700.0	7,311.0	12,370.0	7,486.0	96.8	90.7	93.51	-5,391.6	-1,325.5	1,307.3	1,120.4	186.95	6.993	
12,800.0	7,311.0	12,270.0	7,486.0	98.5	88.9	93.51	-5,491.6	-1,324.3	1,307.4	1,120.5	186.95	6.993	
12,900.0	7,311.0	12,170.0	7,486.0	100.3	87.2	93.51	-5,591.6	-1,323.1	1,307.6	1,120.6	186.96	6.994	
13,000.0	7,311.0	12,070.0	7,486.0	102.0	85.5	93.51	-5,691.5	-1,321.9	1,307.7	1,120.7	186.96	6.994	
13,100.0	7,311.0	11,970.0	7,486.0	103.7	83.7	93.51	-5,791.5	-1,320.7	1,307.8	1,120.8	186.97	6.995	
13,200.0	7,311.0	11,870.0	7,486.0	105.5	82.0	93.51	-5,891.5	-1,319.5	1,307.9	1,120.9	186.98	6.995	
13,300.0	7,311.0	11,770.0	7,486.0	107.2	80.3	93.51	-5,991.5	-1,318.2	1,308.0	1,121.1	186.99	6.995	
13,400.0	7,311.0	11,670.0	7,486.0	109.0	78.6	93.51	-6,091.5	-1,317.0	1,308.2	1,121.2	187.00	6.996	
13,500.0	7,311.0	11,570.0	7,486.0	110.7	76.8	93.51	-6,191.5	-1,315.8	1,308.3	1,121.3	187.01	6.996	
13,600.0	7,311.0	11,470.0	7,486.0	112.4	75.1	93.51	-6,291.5	-1,314.6	1,308.4	1,121.4	187.02	6.996	
13,700.0	7,311.0	11,370.0	7,486.0	114.2	73.4	93.51	-6,391.5	-1,313.4	1,308.5	1,121.5	187.04	6.996	
13,800.0	7,311.0	11,270.0	7,486.0	115.9	71.7	93.50	-6,491.5	-1,312.2	1,308.6	1,121.6	187.05	6.996	
13,900.0	7,311.0	11,170.0	7,486.0	117.7	69.9	93.50	-6,591.5	-1,310.9	1,308.8	1,121.7	187.07	6.996	
14,000.0	7,311.0	11,070.0	7,486.0	119.4	68.2	93.50	-6,691.5	-1,309.7	1,308.9	1,121.8	187.09	6.996	
14,100.0	7,311.0	10,970.0	7,486.0	121.2	66.5	93.50	-6,791.5	-1,308.5	1,309.0	1,121.9	187.11	6.996	
14,200.0	7,311.0	10,870.0	7,486.0	122.9	64.8	93.50	-6,891.5	-1,307.3	1,309.1	1,122.0	187.14	6.995	
14,300.0	7,311.0	10,770.0	7,486.0	124.7	63.1	93.50	-6,991.5	-1,306.1	1,309.2	1,122.1	187.16	6.995	
14,400.0	7,311.0	10,670.0	7,486.0	126.4	61.4	93.50	-7,091.4	-1,304.8	1,309.4	1,122.2	187.19	6.995	
14,500.0	7,311.0	10,570.0	7,486.0	128.1	59.7	93.50	-7,191.4	-1,303.6	1,309.5	1,122.3	187.22	6.994	
14,600.0	7,311.0	10,470.0	7,486.0	129.9	58.0	93.50	-7,291.4	-1,302.4	1,309.6	1,122.4	187.26	6.994	
14,700.0	7,311.0	10,370.0	7,486.0	131.6	56.2	93.50	-7,391.4	-1,301.2	1,309.7	1,122.4	187.29	6.993	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - Kugel 1E-18H-H267 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,800.0	7,311.0	10,270.0	7,486.0	133.4	54.5	93.50	-7,491.4	-1,300.0	1,309.9	1,122.5	187.33	6.992	
14,900.0	7,311.0	10,170.0	7,486.0	135.1	52.9	93.50	-7,591.4	-1,298.8	1,310.0	1,122.6	187.37	6.991	
15,000.0	7,311.0	10,070.0	7,486.0	136.9	51.2	93.50	-7,691.4	-1,297.5	1,310.1	1,122.7	187.42	6.990	
15,087.3	7,311.0	9,982.7	7,486.0	138.4	49.7	93.50	-7,778.7	-1,296.5	1,310.2	1,122.7	187.46	6.989	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - Kugel 1F-18H-H267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,500.0	7,311.0	14,237.9	7,270.0	41.8	126.7	82.29	-3,311.3	-1,042.5	1,529.0	1,362.0	166.98	9.157	
9,600.0	7,311.0	14,237.9	7,270.0	43.5	126.7	82.29	-3,311.3	-1,042.5	1,455.7	1,287.1	168.64	8.632	
9,700.0	7,311.0	14,237.9	7,270.0	45.1	126.7	82.29	-3,311.3	-1,042.5	1,385.7	1,215.4	170.31	8.137	
9,800.0	7,311.0	14,237.9	7,270.0	46.8	126.7	82.29	-3,311.3	-1,042.5	1,319.6	1,147.6	171.98	7.673	
9,900.0	7,311.0	14,237.9	7,270.0	48.5	126.7	82.29	-3,311.3	-1,042.5	1,258.0	1,084.3	173.66	7.244	
10,000.0	7,311.0	14,237.9	7,270.0	50.2	126.7	82.29	-3,311.3	-1,042.5	1,201.5	1,026.2	175.34	6.853	
10,100.0	7,311.0	14,237.9	7,270.0	51.9	126.7	82.29	-3,311.3	-1,042.5	1,151.0	974.0	177.02	6.502	
10,200.0	7,311.0	14,237.9	7,270.0	53.6	126.7	82.29	-3,311.3	-1,042.5	1,107.3	928.5	178.71	6.196	
10,300.0	7,311.0	14,237.9	7,270.0	55.3	126.7	82.29	-3,311.3	-1,042.5	1,071.1	890.7	180.40	5.937	
10,400.0	7,311.0	14,237.9	7,270.0	57.0	126.7	82.29	-3,311.3	-1,042.5	1,043.2	861.1	182.09	5.729	
10,500.0	7,311.0	14,237.9	7,270.0	58.7	126.7	82.29	-3,311.3	-1,042.5	1,024.4	840.7	183.79	5.574	
10,600.0	7,311.0	14,168.5	7,270.0	60.5	125.5	82.23	-3,380.4	-1,035.3	1,012.8	828.6	184.26	5.497	
10,700.0	7,311.0	14,069.1	7,270.0	62.2	123.7	82.15	-3,479.2	-1,025.0	1,001.7	817.4	184.22	5.437	
10,800.0	7,311.0	13,969.8	7,270.0	63.9	122.0	82.06	-3,578.0	-1,014.6	990.5	806.3	184.17	5.378	
10,900.0	7,311.0	13,870.4	7,270.0	65.6	120.3	81.97	-3,676.8	-1,004.3	979.3	795.2	184.12	5.319	
11,000.0	7,311.0	13,771.0	7,270.0	67.3	118.5	81.87	-3,775.6	-993.9	968.1	784.1	184.07	5.259	
11,069.7	7,311.0	13,701.8	7,270.0	68.5	117.3	81.81	-3,844.5	-986.7	960.3	776.3	184.04	5.218	
11,100.0	7,311.0	13,671.7	7,270.0	69.1	116.8	81.78	-3,874.5	-983.6	957.0	773.0	184.04	5.200	
11,196.4	7,311.0	13,575.7	7,270.0	70.7	115.1	81.71	-3,969.9	-973.6	947.6	763.6	183.98	5.150	
11,200.0	7,311.0	13,572.1	7,270.0	70.8	115.1	81.71	-3,973.4	-973.2	947.3	763.3	183.98	5.149	
11,300.0	7,311.0	13,472.6	7,270.0	72.5	113.3	81.63	-4,072.5	-962.8	938.3	754.3	183.94	5.101	
11,400.0	7,311.0	13,373.0	7,270.0	74.2	111.6	81.55	-4,171.5	-952.5	929.3	745.4	183.89	5.053	
11,500.0	7,311.0	13,276.7	7,270.0	76.0	109.9	81.47	-4,267.3	-942.5	920.3	736.4	183.91	5.004	
11,600.0	7,311.0	13,190.7	7,270.0	77.7	108.4	81.41	-4,353.0	-934.5	912.5	728.4	184.11	4.956	
11,700.0	7,311.0	13,100.0	7,270.0	79.4	106.9	81.35	-4,443.3	-927.4	906.1	721.8	184.24	4.918	
11,800.0	7,311.0	13,018.0	7,270.0	81.2	105.4	81.31	-4,525.2	-922.3	901.2	716.6	184.52	4.884	
11,900.0	7,311.0	12,931.5	7,270.0	82.9	103.9	81.28	-4,611.6	-918.1	897.7	713.0	184.73	4.860	
12,000.0	7,311.0	12,844.9	7,270.0	84.6	102.4	81.27	-4,698.1	-915.3	895.8	710.9	184.94	4.844	
12,078.8	7,311.0	12,776.7	7,270.0	86.0	101.2	81.26	-4,766.3	-914.0	895.4	710.2	185.12	4.837	CC
12,100.0	7,311.0	12,758.3	7,270.0	86.4	100.9	81.26	-4,784.7	-913.8	895.4	710.2	185.17	4.836	ES
12,200.0	7,311.0	12,671.7	7,270.0	88.1	99.4	81.27	-4,871.3	-913.5	896.5	711.1	185.40	4.835	SF
12,300.0	7,311.0	12,585.1	7,270.0	89.8	97.9	81.29	-4,957.9	-914.6	899.0	713.4	185.63	4.843	
12,400.0	7,311.0	12,498.5	7,270.0	91.6	96.4	81.33	-5,044.5	-917.0	903.1	717.2	185.88	4.858	
12,500.0	7,311.0	12,398.6	7,270.0	93.3	94.7	81.37	-5,144.3	-920.5	907.8	721.9	185.90	4.883	
12,600.0	7,311.0	12,298.7	7,270.0	95.0	92.9	81.42	-5,244.2	-924.0	912.6	726.7	185.92	4.909	
12,700.0	7,311.0	12,198.8	7,270.0	96.8	91.2	81.46	-5,344.0	-927.5	917.4	731.4	185.95	4.934	
12,800.0	7,311.0	12,098.9	7,270.0	98.5	89.5	81.51	-5,443.8	-931.0	922.2	736.2	185.97	4.959	
12,900.0	7,311.0	11,999.0	7,270.0	100.3	87.7	81.55	-5,543.6	-934.5	927.0	740.9	186.00	4.984	
13,000.0	7,311.0	11,899.2	7,270.0	102.0	86.0	81.60	-5,643.4	-937.9	931.7	745.7	186.03	5.009	
13,100.0	7,311.0	11,799.3	7,270.0	103.7	84.3	81.64	-5,743.3	-941.4	936.5	750.5	186.06	5.033	
13,200.0	7,311.0	11,699.4	7,270.0	105.5	82.5	81.68	-5,843.1	-944.9	941.3	755.2	186.09	5.058	
13,300.0	7,311.0	11,599.5	7,270.0	107.2	80.8	81.73	-5,942.9	-948.4	946.1	760.0	186.12	5.083	
13,400.0	7,311.0	11,499.6	7,270.0	109.0	79.1	81.77	-6,042.7	-951.9	950.9	764.7	186.15	5.108	
13,500.0	7,311.0	11,399.7	7,270.0	110.7	77.3	81.81	-6,142.6	-955.4	955.6	769.5	186.18	5.133	
13,600.0	7,311.0	11,299.9	7,270.0	112.4	75.6	81.85	-6,242.4	-958.9	960.4	774.2	186.21	5.158	
13,700.0	7,311.0	11,200.0	7,270.0	114.2	73.9	81.89	-6,342.2	-962.4	965.2	779.0	186.25	5.182	
13,800.0	7,311.0	11,100.1	7,270.0	115.9	72.1	81.93	-6,442.0	-965.9	970.0	783.7	186.28	5.207	
13,900.0	7,311.0	11,000.2	7,270.0	117.7	70.4	81.97	-6,541.8	-969.4	974.8	788.4	186.32	5.232	
14,000.0	7,311.0	10,900.3	7,270.0	119.4	68.7	82.01	-6,641.7	-972.8	979.6	793.2	186.36	5.256	
14,100.0	7,311.0	10,800.4	7,270.0	121.2	67.0	82.05	-6,741.5	-976.3	984.3	797.9	186.40	5.281	
14,200.0	7,311.0	10,700.6	7,270.0	122.9	65.3	82.09	-6,841.3	-979.8	989.1	802.7	186.44	5.305	
14,300.0	7,311.0	10,600.7	7,270.0	124.7	63.5	82.13	-6,941.1	-983.3	993.9	807.4	186.48	5.330	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - Kugel 1F-18H-H267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,400.0	7,311.0	10,500.8	7,270.0	126.4	61.8	82.16	-7,041.0	-986.8	998.7	812.2	186.53	5.354	
14,500.0	7,311.0	10,400.9	7,270.0	128.1	60.1	82.20	-7,140.8	-990.3	1,003.5	816.9	186.57	5.378	
14,600.0	7,311.0	10,301.0	7,270.0	129.9	58.4	82.24	-7,240.6	-993.8	1,008.3	821.6	186.62	5.403	
14,700.0	7,311.0	10,201.1	7,270.0	131.6	56.7	82.28	-7,340.4	-997.3	1,013.1	826.4	186.67	5.427	
14,800.0	7,311.0	10,101.3	7,270.0	133.4	55.0	82.31	-7,440.2	-1,000.8	1,017.8	831.1	186.73	5.451	
14,900.0	7,311.0	10,001.4	7,270.0	135.1	53.3	82.35	-7,540.1	-1,004.3	1,022.6	835.8	186.79	5.475	
15,000.0	7,311.0	9,901.5	7,270.0	136.9	51.6	82.38	-7,639.9	-1,007.7	1,027.4	840.6	186.85	5.499	
15,087.3	7,311.0	9,814.3	7,270.0	138.4	50.1	82.42	-7,727.1	-1,010.8	1,031.6	844.7	186.90	5.520	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - Kugel 1G-18H-H267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,300.0	7,311.0	14,439.5	7,486.0	38.4	126.6	96.96	-3,318.6	-693.2	1,501.5	1,337.7	163.88	9.162	
9,400.0	7,311.0	14,439.5	7,486.0	40.1	126.6	96.96	-3,318.6	-693.2	1,412.4	1,246.9	165.53	8.533	
9,500.0	7,311.0	14,439.5	7,486.0	41.8	126.6	96.96	-3,318.6	-693.2	1,324.9	1,157.7	167.18	7.925	
9,600.0	7,311.0	14,439.5	7,486.0	43.5	126.6	96.96	-3,318.6	-693.2	1,239.2	1,070.3	168.85	7.339	
9,700.0	7,311.0	14,439.5	7,486.0	45.1	126.6	96.96	-3,318.6	-693.2	1,155.8	985.3	170.52	6.778	
9,800.0	7,311.0	14,439.5	7,486.0	46.8	126.6	96.96	-3,318.6	-693.2	1,075.3	903.1	172.19	6.245	
9,900.0	7,311.0	14,439.5	7,486.0	48.5	126.6	96.96	-3,318.6	-693.2	998.2	824.4	173.87	5.741	
10,000.0	7,311.0	14,439.5	7,486.0	50.2	126.6	96.96	-3,318.6	-693.2	925.6	750.1	175.55	5.273	
10,100.0	7,311.0	14,439.5	7,486.0	51.9	126.6	96.96	-3,318.6	-693.2	858.5	681.3	177.24	4.844	
10,200.0	7,311.0	14,439.5	7,486.0	53.6	126.6	96.96	-3,318.6	-693.2	798.4	619.4	178.93	4.462	
10,300.0	7,311.0	14,439.5	7,486.0	55.3	126.6	96.96	-3,318.6	-693.2	746.8	566.2	180.62	4.135	
10,400.0	7,311.0	14,439.5	7,486.0	57.0	126.6	96.96	-3,318.6	-693.2	705.7	523.4	182.32	3.871	
10,500.0	7,311.0	14,439.5	7,486.0	58.7	126.6	96.96	-3,318.6	-693.2	677.0	493.0	184.02	3.679	
10,600.0	7,311.0	14,439.5	7,486.0	60.5	126.6	96.96	-3,318.6	-693.2	662.3	476.6	185.72	3.566	
10,700.0	7,311.0	14,382.3	7,486.0	62.2	125.6	96.96	-3,375.8	-693.2	660.1	473.6	186.43	3.540	
10,800.0	7,311.0	14,282.3	7,486.0	63.9	123.9	96.97	-3,475.8	-693.2	659.2	472.8	186.40	3.536	
10,900.0	7,311.0	14,182.3	7,486.0	65.6	122.1	96.98	-3,575.8	-693.2	658.3	472.0	186.37	3.532	
11,000.0	7,311.0	14,082.3	7,486.0	67.3	120.4	96.99	-3,675.8	-693.2	657.5	471.1	186.35	3.528	
11,069.7	7,311.0	14,012.6	7,486.0	68.5	119.2	97.00	-3,745.5	-693.2	656.9	470.5	186.33	3.525	
11,100.0	7,311.0	13,982.3	7,486.0	69.1	118.7	97.00	-3,775.8	-693.2	656.7	470.4	186.31	3.525	SF
11,119.5	7,311.0	13,962.8	7,486.0	69.4	118.3	97.00	-3,795.3	-693.2	656.7	470.4	186.29	3.525	CC, ES
11,196.4	7,311.0	13,885.9	7,486.0	70.7	117.0	96.99	-3,872.2	-693.2	657.2	471.0	186.19	3.530	
11,200.0	7,311.0	13,882.3	7,486.0	70.8	116.9	96.99	-3,875.8	-693.2	657.2	471.0	186.19	3.530	
11,300.0	7,311.0	13,782.3	7,486.0	72.5	115.2	96.98	-3,975.8	-693.2	658.5	472.4	186.18	3.537	
11,400.0	7,311.0	13,682.3	7,486.0	74.2	113.4	96.96	-4,075.8	-693.2	659.9	473.7	186.17	3.544	
11,500.0	7,311.0	13,582.3	7,486.0	76.0	111.7	96.95	-4,175.8	-693.2	661.2	475.0	186.16	3.552	
11,600.0	7,311.0	13,482.3	7,486.0	77.7	109.9	96.94	-4,275.8	-693.2	662.5	476.4	186.16	3.559	
11,700.0	7,311.0	13,382.3	7,486.0	79.4	108.2	96.92	-4,375.7	-693.2	663.9	477.7	186.15	3.566	
11,800.0	7,311.0	13,282.3	7,486.0	81.2	106.5	96.91	-4,475.7	-693.2	665.2	479.1	186.15	3.574	
11,900.0	7,311.0	13,182.4	7,486.0	82.9	104.7	96.89	-4,575.7	-693.2	666.5	480.4	186.15	3.581	
12,000.0	7,311.0	13,082.4	7,486.0	84.6	103.0	96.88	-4,675.7	-693.2	667.9	481.7	186.14	3.588	
12,100.0	7,311.0	12,982.4	7,486.0	86.4	101.2	96.87	-4,775.7	-693.2	669.2	483.1	186.14	3.595	
12,200.0	7,311.0	12,882.4	7,486.0	88.1	99.5	96.85	-4,875.7	-693.2	670.5	484.4	186.15	3.602	
12,300.0	7,311.0	12,782.4	7,486.0	89.8	97.8	96.84	-4,975.7	-693.2	671.9	485.7	186.15	3.609	
12,400.0	7,311.0	12,682.4	7,486.0	91.6	96.0	96.83	-5,075.7	-693.2	673.2	487.1	186.15	3.616	
12,500.0	7,311.0	12,582.4	7,486.0	93.3	94.3	96.81	-5,175.7	-693.2	674.5	488.4	186.16	3.623	
12,600.0	7,311.0	12,482.4	7,486.0	95.0	92.6	96.80	-5,275.7	-693.2	675.9	489.7	186.16	3.631	
12,700.0	7,311.0	12,382.4	7,486.0	96.8	90.8	96.78	-5,375.7	-693.2	677.2	491.0	186.17	3.638	
12,800.0	7,311.0	12,282.4	7,486.0	98.5	89.1	96.77	-5,475.6	-693.2	678.5	492.4	186.18	3.645	
12,900.0	7,311.0	12,182.4	7,486.0	100.3	87.4	96.76	-5,575.6	-693.2	679.9	493.7	186.19	3.652	
13,000.0	7,311.0	12,082.5	7,486.0	102.0	85.6	96.74	-5,675.6	-693.3	681.2	495.0	186.20	3.658	
13,100.0	7,311.0	11,982.5	7,486.0	103.7	83.9	96.73	-5,775.6	-693.3	682.5	496.3	186.21	3.665	
13,200.0	7,311.0	11,882.5	7,486.0	105.5	82.2	96.72	-5,875.6	-693.3	683.9	497.6	186.23	3.672	
13,300.0	7,311.0	11,782.5	7,486.0	107.2	80.4	96.71	-5,975.6	-693.3	685.2	499.0	186.24	3.679	
13,400.0	7,311.0	11,682.5	7,486.0	109.0	78.7	96.69	-6,075.6	-693.3	686.5	500.3	186.26	3.686	
13,500.0	7,311.0	11,582.5	7,486.0	110.7	77.0	96.68	-6,175.6	-693.3	687.9	501.6	186.27	3.693	
13,600.0	7,311.0	11,482.5	7,486.0	112.4	75.3	96.67	-6,275.6	-693.3	689.2	502.9	186.29	3.700	
13,700.0	7,311.0	11,382.5	7,486.0	114.2	73.5	96.65	-6,375.6	-693.3	690.5	504.2	186.31	3.706	
13,800.0	7,311.0	11,282.5	7,486.0	115.9	71.8	96.64	-6,475.6	-693.3	691.9	505.5	186.33	3.713	
13,900.0	7,311.0	11,182.5	7,486.0	117.7	70.1	96.63	-6,575.5	-693.3	693.2	506.8	186.36	3.720	
14,000.0	7,311.0	11,082.5	7,486.0	119.4	68.4	96.61	-6,675.5	-693.3	694.5	508.2	186.38	3.726	
14,100.0	7,311.0	10,982.6	7,486.0	121.2	66.6	96.60	-6,775.5	-693.3	695.9	509.5	186.41	3.733	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - Kugel 1G-18H-H267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,200.0	7,311.0	10,882.6	7,486.0	122.9	64.9	96.59	-6,875.5	-693.3	697.2	510.8	186.44	3.740	
14,300.0	7,311.0	10,782.6	7,486.0	124.7	63.2	96.58	-6,975.5	-693.3	698.5	512.1	186.47	3.746	
14,400.0	7,311.0	10,682.6	7,486.0	126.4	61.5	96.56	-7,075.5	-693.3	699.9	513.4	186.50	3.753	
14,500.0	7,311.0	10,582.6	7,486.0	128.1	59.8	96.55	-7,175.5	-693.3	701.2	514.7	186.54	3.759	
14,600.0	7,311.0	10,482.6	7,486.0	129.9	58.1	96.54	-7,275.5	-693.3	702.5	516.0	186.58	3.765	
14,700.0	7,311.0	10,382.6	7,486.0	131.6	56.4	96.53	-7,375.5	-693.3	703.9	517.3	186.62	3.772	
14,800.0	7,311.0	10,282.6	7,486.0	133.4	54.7	96.51	-7,475.5	-693.3	705.2	518.5	186.66	3.778	
14,900.0	7,311.0	10,182.6	7,486.0	135.1	53.0	96.50	-7,575.5	-693.3	706.5	519.8	186.71	3.784	
15,000.0	7,311.0	10,082.6	7,486.0	136.9	51.3	96.49	-7,675.4	-693.3	707.9	521.1	186.76	3.790	
15,087.3	7,311.0	9,995.3	7,486.0	138.4	49.8	96.48	-7,762.8	-693.3	709.0	522.2	186.81	3.796	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - KUGEL 41-18 (EXISTING) - ENCANA WELL - ENCANA WELL

Offset Site Error: 0.0 ft

Survey Program: 8020-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,800.0	7,311.0	7,371.0	7,371.0	133.4	12.9	90.00	-8,677.9	-934.9	1,527.6	1,381.3	146.24	10.446	
14,900.0	7,311.0	7,371.0	7,371.0	135.1	12.9	90.00	-8,677.9	-934.9	1,451.0	1,303.1	147.98	9.805	
15,000.0	7,311.0	7,371.0	7,371.0	136.9	12.9	90.00	-8,677.9	-934.9	1,377.5	1,227.8	149.73	9.200	
15,087.3	7,311.0	7,371.0	7,371.0	138.4	12.9	90.00	-8,677.9	-934.9	1,316.2	1,164.9	151.26	8.702	CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - WANDELL 1 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 7911-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,500.0	7,311.0	7,336.0	7,336.0	58.7	12.8	90.00	-3,831.1	-1,391.1	1,505.0	1,433.5	71.54	21.037	
10,600.0	7,311.0	7,336.0	7,336.0	60.5	12.8	90.00	-3,831.1	-1,391.1	1,463.4	1,390.2	73.26	19.977	
10,700.0	7,311.0	7,336.0	7,336.0	62.2	12.8	90.00	-3,831.1	-1,391.1	1,427.7	1,352.7	74.97	19.043	
10,800.0	7,311.0	7,336.0	7,336.0	63.9	12.8	90.00	-3,831.1	-1,391.1	1,398.1	1,321.5	76.69	18.231	
10,900.0	7,311.0	7,336.0	7,336.0	65.6	12.8	90.00	-3,831.1	-1,391.1	1,375.3	1,296.9	78.41	17.539	
11,000.0	7,311.0	7,336.0	7,336.0	67.3	12.8	90.00	-3,831.1	-1,391.1	1,359.4	1,279.3	80.13	16.964	
11,069.7	7,311.0	7,336.0	7,336.0	68.5	12.8	90.00	-3,831.1	-1,391.1	1,352.6	1,271.3	81.34	16.630	
11,100.0	7,311.0	7,336.0	7,336.0	69.1	12.8	90.00	-3,831.1	-1,391.1	1,350.9	1,269.0	81.86	16.503	
11,148.5	7,311.0	7,336.0	7,336.0	69.9	12.8	90.00	-3,831.1	-1,391.1	1,349.8	1,267.1	82.69	16.324	CC, ES
11,196.4	7,311.0	7,336.0	7,336.0	70.7	12.8	90.00	-3,831.1	-1,391.1	1,350.8	1,267.3	83.50	16.177	
11,200.0	7,311.0	7,336.0	7,336.0	70.8	12.8	90.00	-3,831.1	-1,391.1	1,351.0	1,267.4	83.56	16.167	
11,300.0	7,311.0	7,336.0	7,336.0	72.5	12.8	90.00	-3,831.1	-1,391.1	1,359.3	1,274.0	85.29	15.937	
11,400.0	7,311.0	7,336.0	7,336.0	74.2	12.8	90.00	-3,831.1	-1,391.1	1,374.9	1,287.9	87.02	15.800	
11,500.0	7,311.0	7,336.0	7,336.0	76.0	12.8	90.00	-3,831.1	-1,391.1	1,397.4	1,308.7	88.75	15.746	SF
11,600.0	7,311.0	7,336.0	7,336.0	77.7	12.8	90.00	-3,831.1	-1,391.1	1,426.7	1,336.2	90.48	15.768	
11,700.0	7,311.0	7,336.0	7,336.0	79.4	12.8	90.00	-3,831.1	-1,391.1	1,462.2	1,370.0	92.21	15.857	
11,800.0	7,311.0	7,336.0	7,336.0	81.2	12.8	90.00	-3,831.1	-1,391.1	1,503.5	1,409.6	93.94	16.005	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - WANDELL 41-7 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 170-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,400.0	7,311.0	7,427.9	7,357.4	40.1	18.2	91.25	-3,330.6	-925.0	1,543.3	1,487.5	55.80	27.658	
9,500.0	7,311.0	7,425.7	7,355.3	41.8	18.2	91.12	-3,330.6	-925.0	1,462.6	1,405.1	57.46	25.452	
9,600.0	7,311.0	7,423.6	7,353.1	43.5	18.2	90.98	-3,330.6	-925.0	1,384.4	1,325.3	59.14	23.410	
9,700.0	7,311.0	7,421.5	7,351.0	45.1	18.1	90.84	-3,330.7	-924.9	1,309.2	1,248.4	60.82	21.528	
9,800.0	7,311.0	7,419.3	7,348.9	46.8	18.1	90.70	-3,330.7	-924.9	1,237.6	1,175.1	62.50	19.802	
9,900.0	7,311.0	7,417.2	7,346.7	48.5	18.1	90.56	-3,330.8	-924.9	1,170.1	1,105.9	64.19	18.229	
10,000.0	7,311.0	7,415.0	7,344.6	50.2	18.1	90.42	-3,330.8	-924.9	1,107.5	1,041.6	65.88	16.811	
10,100.0	7,311.0	7,412.9	7,342.4	51.9	18.1	90.28	-3,330.9	-924.9	1,050.7	983.1	67.57	15.549	
10,200.0	7,311.0	7,410.7	7,340.2	53.6	18.1	90.14	-3,330.9	-924.9	1,000.7	931.4	69.27	14.446	
10,300.0	7,311.0	7,408.5	7,338.0	55.3	18.1	90.00	-3,331.0	-924.8	958.6	887.6	70.98	13.506	
10,400.0	7,311.0	7,406.2	7,335.8	57.0	18.1	89.86	-3,331.0	-924.8	925.3	852.7	72.68	12.732	
10,500.0	7,311.0	7,404.0	7,333.5	58.7	18.1	89.71	-3,331.1	-924.8	902.0	827.7	74.39	12.127	
10,600.0	7,311.0	7,401.7	7,331.3	60.5	18.1	89.56	-3,331.1	-924.8	889.4	813.3	76.09	11.689	
10,663.1	7,311.0	7,400.3	7,329.8	61.5	18.1	89.47	-3,331.2	-924.8	887.2	810.0	77.17	11.496	CC, ES
10,700.0	7,311.0	7,399.4	7,329.0	62.2	18.1	89.42	-3,331.2	-924.8	888.0	810.1	77.80	11.413	
10,800.0	7,311.0	7,397.2	7,326.7	63.9	18.1	89.27	-3,331.2	-924.7	897.7	818.2	79.51	11.290	SF
10,900.0	7,311.0	7,394.8	7,324.4	65.6	18.1	89.12	-3,331.3	-924.7	918.3	837.0	81.23	11.305	
11,000.0	7,311.0	7,392.5	7,322.0	67.3	18.1	88.97	-3,331.3	-924.7	949.0	866.0	82.94	11.442	
11,069.7	7,311.0	7,390.9	7,320.4	68.5	18.1	88.86	-3,331.4	-924.7	975.9	891.8	84.14	11.599	
11,100.0	7,311.0	7,390.2	7,319.7	69.1	18.1	88.81	-3,331.4	-924.7	989.0	904.3	84.63	11.686	
11,196.4	7,311.0	7,387.9	7,317.4	70.7	18.1	88.66	-3,331.4	-924.6	1,036.3	950.1	86.17	12.026	
11,200.0	7,311.0	7,387.8	7,317.4	70.8	18.1	88.65	-3,331.4	-924.6	1,038.2	952.0	86.24	12.039	
11,300.0	7,311.0	7,385.5	7,315.0	72.5	18.1	88.50	-3,331.5	-924.6	1,095.0	1,007.1	87.95	12.450	
11,400.0	7,311.0	7,383.1	7,312.6	74.2	18.1	88.34	-3,331.5	-924.6	1,157.7	1,068.1	89.67	12.911	
11,500.0	7,311.0	7,380.7	7,310.2	76.0	18.1	88.18	-3,331.6	-924.6	1,225.4	1,134.0	91.38	13.409	
11,600.0	7,311.0	7,378.2	7,307.7	77.7	18.1	88.02	-3,331.6	-924.6	1,297.2	1,204.1	93.10	13.933	
11,700.0	7,311.0	7,375.7	7,305.2	79.4	18.1	87.86	-3,331.7	-924.5	1,372.6	1,277.7	94.82	14.476	
11,800.0	7,311.0	7,373.1	7,302.7	81.2	18.1	87.69	-3,331.8	-924.5	1,450.9	1,354.4	96.53	15.030	
11,900.0	7,311.0	7,370.6	7,300.1	82.9	18.1	87.52	-3,331.8	-924.5	1,531.7	1,433.5	98.25	15.591	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - WANDELL 42-7 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 370-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,069.7	7,311.0	7,505.3	7,340.5	68.5	24.3	90.15	-4,911.2	-989.6	1,502.7	1,411.2	91.54	16.417	
11,100.0	7,311.0	7,505.1	7,340.4	69.1	24.3	90.14	-4,911.2	-989.6	1,479.3	1,387.2	92.09	16.063	
11,196.4	7,311.0	7,504.7	7,339.9	70.7	24.3	90.12	-4,911.2	-989.6	1,406.9	1,313.1	93.84	14.993	
11,200.0	7,311.0	7,504.7	7,339.9	70.8	24.3	90.11	-4,911.2	-989.6	1,404.3	1,310.4	93.90	14.955	
11,300.0	7,311.0	7,504.2	7,339.4	72.5	24.3	90.09	-4,911.2	-989.6	1,333.3	1,237.6	95.63	13.942	
11,400.0	7,311.0	7,503.7	7,339.0	74.2	24.3	90.06	-4,911.2	-989.6	1,266.1	1,168.8	97.36	13.005	
11,500.0	7,311.0	7,503.2	7,338.4	76.0	24.3	90.03	-4,911.2	-989.6	1,203.6	1,104.5	99.09	12.147	
11,600.0	7,311.0	7,502.7	7,337.9	77.7	24.3	90.00	-4,911.2	-989.6	1,146.3	1,045.5	100.81	11.370	
11,700.0	7,311.0	7,502.1	7,337.4	79.4	24.3	89.96	-4,911.2	-989.5	1,095.2	992.7	102.55	10.680	
11,800.0	7,311.0	7,501.6	7,336.8	81.2	24.3	89.93	-4,911.2	-989.5	1,051.2	946.9	104.28	10.081	
11,900.0	7,311.0	7,500.0	7,335.2	82.9	24.3	89.84	-4,911.3	-989.5	1,015.1	909.1	106.01	9.576	
12,000.0	7,311.0	7,500.0	7,335.2	84.6	24.3	89.84	-4,911.3	-989.5	987.9	880.1	107.74	9.169	
12,100.0	7,311.0	7,500.0	7,335.2	86.4	24.3	89.84	-4,911.3	-989.5	970.2	860.8	109.48	8.863	
12,200.0	7,311.0	7,499.0	7,334.3	88.1	24.3	89.78	-4,911.3	-989.5	962.7	851.5	111.21	8.657	
12,222.7	7,311.0	7,498.9	7,334.1	88.5	24.3	89.77	-4,911.3	-989.5	962.5	850.9	111.60	8.624	CC, ES
12,300.0	7,311.0	7,498.4	7,333.7	89.8	24.3	89.74	-4,911.3	-989.5	965.6	852.6	112.95	8.549	
12,400.0	7,311.0	7,497.8	7,333.1	91.6	24.3	89.71	-4,911.3	-989.5	978.7	864.0	114.68	8.534	SF
12,500.0	7,311.0	7,497.3	7,332.5	93.3	24.3	89.67	-4,911.3	-989.5	1,001.6	885.2	116.42	8.604	
12,600.0	7,311.0	7,496.8	7,332.0	95.0	24.3	89.64	-4,911.3	-989.5	1,033.8	915.6	118.16	8.749	
12,700.0	7,311.0	7,496.3	7,331.5	96.8	24.3	89.61	-4,911.3	-989.5	1,074.3	954.4	119.89	8.961	
12,800.0	7,311.0	7,495.8	7,331.1	98.5	24.3	89.59	-4,911.3	-989.5	1,122.3	1,000.7	121.63	9.227	
12,900.0	7,311.0	7,495.4	7,330.6	100.3	24.3	89.56	-4,911.3	-989.5	1,176.9	1,053.5	123.37	9.539	
13,000.0	7,311.0	7,495.0	7,330.2	102.0	24.3	89.54	-4,911.3	-989.5	1,237.2	1,112.1	125.11	9.888	
13,100.0	7,311.0	7,494.6	7,329.8	103.7	24.3	89.51	-4,911.3	-989.5	1,302.3	1,175.5	126.85	10.266	
13,200.0	7,311.0	7,494.2	7,329.5	105.5	24.3	89.49	-4,911.3	-989.5	1,371.7	1,243.1	128.59	10.667	
13,300.0	7,311.0	7,493.8	7,329.1	107.2	24.3	89.47	-4,911.3	-989.5	1,444.6	1,314.3	130.33	11.084	
13,400.0	7,311.0	7,493.5	7,328.8	109.0	24.3	89.45	-4,911.3	-989.5	1,520.7	1,388.6	132.07	11.514	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - WANDELL 43-7 (EXISTING) - ENCANA WELL - PLAN ONLY — **Offset Site Error:** 0.0 ft

Survey Program: 0-Geolink MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,500.0	7,311.0	7,607.1	7,334.9	93.3	34.1	89.70	-6,186.2	-1,149.0	1,512.6	1,391.9	120.70	12.532	
12,600.0	7,311.0	7,623.7	7,351.2	95.0	34.2	90.51	-6,188.9	-1,146.6	1,448.6	1,326.1	122.49	11.826	
12,700.0	7,311.0	7,639.6	7,366.6	96.8	34.2	91.29	-6,191.5	-1,144.4	1,388.8	1,264.5	124.26	11.176	
12,800.0	7,311.0	7,654.6	7,381.3	98.5	34.3	92.04	-6,193.8	-1,142.3	1,333.5	1,207.5	126.01	10.582	
12,900.0	7,311.0	7,668.9	7,395.4	100.3	34.4	92.75	-6,196.0	-1,140.4	1,283.5	1,155.8	127.74	10.048	
13,000.0	7,311.0	7,682.6	7,408.8	102.0	34.4	93.44	-6,198.0	-1,138.7	1,239.4	1,110.0	129.45	9.575	
13,100.0	7,311.0	7,700.0	7,425.9	103.7	34.5	94.31	-6,200.6	-1,136.5	1,201.9	1,070.8	131.12	9.166	
13,200.0	7,311.0	7,708.1	7,433.8	105.5	34.5	94.71	-6,201.7	-1,135.5	1,171.5	1,038.7	132.81	8.821	
13,300.0	7,311.0	7,720.0	7,445.5	107.2	34.5	95.31	-6,203.4	-1,134.0	1,149.0	1,014.5	134.47	8.544	
13,400.0	7,311.0	7,731.4	7,456.7	109.0	34.6	95.88	-6,205.0	-1,132.7	1,134.6	998.5	136.12	8.336	
13,500.0	7,311.0	7,742.3	7,467.4	110.7	34.6	96.43	-6,206.4	-1,131.4	1,128.9	991.1	137.75	8.195	
13,516.0	7,311.0	7,744.0	7,469.1	111.0	34.6	96.52	-6,206.6	-1,131.2	1,128.8	990.8	138.01	8.179	CC, ES
13,600.0	7,311.0	7,752.8	7,477.7	112.4	34.6	96.96	-6,207.8	-1,130.2	1,131.8	992.5	139.37	8.121	
13,700.0	7,311.0	7,762.8	7,487.6	114.2	34.7	97.46	-6,209.1	-1,129.1	1,143.5	1,002.5	140.98	8.111	SF
13,800.0	7,311.0	7,772.5	7,497.2	115.9	34.7	97.95	-6,210.3	-1,128.1	1,163.5	1,020.9	142.59	8.160	
13,900.0	7,311.0	7,781.7	7,506.3	117.7	34.7	98.42	-6,211.4	-1,127.1	1,191.5	1,047.3	144.18	8.264	
14,000.0	7,311.0	7,800.0	7,524.4	119.4	34.8	99.33	-6,213.6	-1,125.2	1,227.0	1,081.4	145.62	8.426	
14,100.0	7,311.0	7,800.0	7,524.4	121.2	34.8	99.33	-6,213.6	-1,125.2	1,269.2	1,121.8	147.34	8.614	
14,200.0	7,311.0	7,800.0	7,524.4	122.9	34.8	99.33	-6,213.6	-1,125.2	1,317.7	1,168.6	149.06	8.840	
14,300.0	7,311.0	7,800.0	7,524.4	124.7	34.8	99.33	-6,213.6	-1,125.2	1,371.7	1,220.9	150.79	9.097	
14,400.0	7,311.0	7,823.2	7,547.3	126.4	34.8	100.50	-6,216.3	-1,122.9	1,430.5	1,278.4	152.06	9.407	
14,500.0	7,311.0	7,830.6	7,554.6	128.1	34.9	100.87	-6,217.1	-1,122.2	1,493.6	1,340.0	153.62	9.723	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - WANDELL 8-2-7 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8111-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,700.0	7,311.0	7,338.0	7,338.0	62.2	12.8	90.00	-3,750.2	-1,531.7	1,539.9	1,464.9	74.98	20.539	
10,800.0	7,311.0	7,338.0	7,338.0	63.9	12.8	90.00	-3,750.2	-1,531.7	1,517.9	1,441.2	76.69	19.791	
10,900.0	7,311.0	7,338.0	7,338.0	65.6	12.8	90.00	-3,750.2	-1,531.7	1,502.1	1,423.7	78.41	19.156	
11,000.0	7,311.0	7,338.0	7,338.0	67.3	12.8	90.00	-3,750.2	-1,531.7	1,493.0	1,412.8	80.14	18.630	
11,069.7	7,311.0	7,338.0	7,338.0	68.5	12.8	90.00	-3,750.2	-1,531.7	1,490.5	1,409.2	81.34	18.325	
11,083.8	7,311.0	7,338.0	7,338.0	68.8	12.8	90.00	-3,750.2	-1,531.7	1,490.4	1,408.8	81.58	18.269	CC
11,100.0	7,311.0	7,338.0	7,338.0	69.1	12.8	90.00	-3,750.2	-1,531.7	1,490.5	1,408.7	81.86	18.208	ES
11,196.4	7,311.0	7,338.0	7,338.0	70.7	12.8	90.00	-3,750.2	-1,531.7	1,495.8	1,412.3	83.51	17.912	
11,200.0	7,311.0	7,338.0	7,338.0	70.8	12.8	90.00	-3,750.2	-1,531.7	1,496.1	1,412.5	83.57	17.903	
11,300.0	7,311.0	7,338.0	7,338.0	72.5	12.8	90.00	-3,750.2	-1,531.7	1,509.1	1,423.8	85.29	17.693	
11,400.0	7,311.0	7,338.0	7,338.0	74.2	12.8	90.00	-3,750.2	-1,531.7	1,528.6	1,441.6	87.02	17.566	SF

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - WANDELL 8-4-7 (EXISTING) - ENCANA WELL - NO SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 7968-Geolink MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,700.0	7,311.0	7,339.0	7,339.0	62.2	12.8	90.00	-3,770.2	-1,526.7	1,540.0	1,465.1	74.98	20.540	
10,800.0	7,311.0	7,339.0	7,339.0	63.9	12.8	90.00	-3,770.2	-1,526.7	1,516.7	1,440.0	76.70	19.775	
10,900.0	7,311.0	7,339.0	7,339.0	65.6	12.8	90.00	-3,770.2	-1,526.7	1,499.6	1,421.2	78.42	19.123	
11,000.0	7,311.0	7,339.0	7,339.0	67.3	12.8	90.00	-3,770.2	-1,526.7	1,489.1	1,408.9	80.14	18.581	
11,069.7	7,311.0	7,339.0	7,339.0	68.5	12.8	90.00	-3,770.2	-1,526.7	1,485.7	1,404.3	81.34	18.265	
11,099.6	7,311.0	7,339.0	7,339.0	69.0	12.8	90.00	-3,770.2	-1,526.7	1,485.3	1,403.4	81.85	18.145	CC
11,100.0	7,311.0	7,339.0	7,339.0	69.1	12.8	90.00	-3,770.2	-1,526.7	1,485.3	1,403.4	81.86	18.144	ES
11,196.4	7,311.0	7,339.0	7,339.0	70.7	12.8	90.00	-3,770.2	-1,526.7	1,489.3	1,405.7	83.51	17.834	
11,200.0	7,311.0	7,339.0	7,339.0	70.8	12.8	90.00	-3,770.2	-1,526.7	1,489.5	1,406.0	83.57	17.824	
11,300.0	7,311.0	7,339.0	7,339.0	72.5	12.8	90.00	-3,770.2	-1,526.7	1,501.3	1,416.0	85.30	17.601	
11,400.0	7,311.0	7,339.0	7,339.0	74.2	12.8	90.00	-3,770.2	-1,526.7	1,519.5	1,432.5	87.02	17.461	
11,500.0	7,311.0	7,339.0	7,339.0	76.0	12.8	90.00	-3,770.2	-1,526.7	1,544.0	1,455.3	88.75	17.397	SF

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - WANDELL E UNIT 1 (EXISTING) - ENCANA WELL - NO SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 7979-Geolink MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,900.0	7,311.0	7,361.0	7,361.0	117.7	12.8	90.00	-7,209.1	-1,378.2	1,512.5	1,382.0	130.51	11.589	
14,000.0	7,311.0	7,361.0	7,361.0	119.4	12.8	90.00	-7,209.1	-1,378.2	1,474.7	1,342.4	132.26	11.150	
14,100.0	7,311.0	7,361.0	7,361.0	121.2	12.8	90.00	-7,209.1	-1,378.2	1,442.8	1,308.8	134.00	10.767	
14,200.0	7,311.0	7,361.0	7,361.0	122.9	12.8	90.00	-7,209.1	-1,378.2	1,417.3	1,281.5	135.75	10.440	
14,300.0	7,311.0	7,361.0	7,361.0	124.7	12.8	90.00	-7,209.1	-1,378.2	1,398.4	1,260.9	137.49	10.171	
14,400.0	7,311.0	7,361.0	7,361.0	126.4	12.8	90.00	-7,209.1	-1,378.2	1,386.6	1,247.3	139.24	9.958	
14,500.0	7,311.0	7,361.0	7,361.0	128.1	12.8	90.00	-7,209.1	-1,378.2	1,381.9	1,240.9	140.98	9.802	
14,515.1	7,311.0	7,361.0	7,361.0	128.4	12.8	90.00	-7,209.1	-1,378.2	1,381.8	1,240.6	141.25	9.783	CC, ES
14,600.0	7,311.0	7,361.0	7,361.0	129.9	12.8	90.00	-7,209.1	-1,378.2	1,384.4	1,241.7	142.73	9.700	
14,700.0	7,311.0	7,361.0	7,361.0	131.6	12.8	90.00	-7,209.1	-1,378.2	1,394.1	1,249.6	144.47	9.650	
14,800.0	7,311.0	7,361.0	7,361.0	133.4	12.8	90.00	-7,209.1	-1,378.2	1,410.9	1,264.7	146.22	9.649	SF
14,900.0	7,311.0	7,361.0	7,361.0	135.1	12.8	90.00	-7,209.1	-1,378.2	1,434.4	1,286.4	147.97	9.694	
15,000.0	7,311.0	7,361.0	7,361.0	136.9	12.8	90.00	-7,209.1	-1,378.2	1,464.4	1,314.7	149.71	9.781	
15,087.3	7,311.0	7,361.0	7,361.0	138.4	12.8	90.00	-7,209.1	-1,378.2	1,495.6	1,344.4	151.24	9.889	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S18-T2N-R67W (Kugel) - WANDELL V 7-8 (EXISTING) - GERRITY OIL WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8000-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,196.4	7,311.0	7,345.0	7,345.0	70.7	12.8	90.00	-4,886.4	-1,163.9	1,513.2	1,429.7	83.52	18.118	
11,200.0	7,311.0	7,345.0	7,345.0	70.8	12.8	90.00	-4,886.4	-1,163.9	1,510.8	1,427.2	83.58	18.077	
11,300.0	7,311.0	7,345.0	7,345.0	72.5	12.8	90.00	-4,886.4	-1,163.9	1,446.9	1,361.6	85.31	16.961	
11,400.0	7,311.0	7,345.0	7,345.0	74.2	12.8	90.00	-4,886.4	-1,163.9	1,387.2	1,300.2	87.03	15.939	
11,500.0	7,311.0	7,345.0	7,345.0	76.0	12.8	90.00	-4,886.4	-1,163.9	1,332.4	1,243.6	88.76	15.011	
11,600.0	7,311.0	7,345.0	7,345.0	77.7	12.8	90.00	-4,886.4	-1,163.9	1,283.0	1,192.6	90.49	14.178	
11,700.0	7,311.0	7,345.0	7,345.0	79.4	12.8	90.00	-4,886.4	-1,163.9	1,239.8	1,147.6	92.22	13.443	
11,800.0	7,311.0	7,345.0	7,345.0	81.2	12.8	90.00	-4,886.4	-1,163.9	1,203.3	1,109.4	93.96	12.807	
11,900.0	7,311.0	7,345.0	7,345.0	82.9	12.8	90.00	-4,886.4	-1,163.9	1,174.3	1,078.6	95.69	12.272	
12,000.0	7,311.0	7,345.0	7,345.0	84.6	12.8	90.00	-4,886.4	-1,163.9	1,153.2	1,055.8	97.42	11.837	
12,100.0	7,311.0	7,345.0	7,345.0	86.4	12.8	90.00	-4,886.4	-1,163.9	1,140.5	1,041.3	99.16	11.502	
12,195.5	7,311.0	7,345.0	7,345.0	88.0	12.8	90.00	-4,886.4	-1,163.9	1,136.5	1,035.7	100.82	11.273	CC
12,200.0	7,311.0	7,345.0	7,345.0	88.1	12.8	90.00	-4,886.4	-1,163.9	1,136.5	1,035.6	100.90	11.264	ES
12,300.0	7,311.0	7,345.0	7,345.0	89.8	12.8	90.00	-4,886.4	-1,163.9	1,141.3	1,038.6	102.63	11.120	
12,400.0	7,311.0	7,345.0	7,345.0	91.6	12.8	90.00	-4,886.4	-1,163.9	1,154.7	1,050.4	104.37	11.064	SF
12,500.0	7,311.0	7,345.0	7,345.0	93.3	12.8	90.00	-4,886.4	-1,163.9	1,176.6	1,070.5	106.11	11.089	
12,600.0	7,311.0	7,345.0	7,345.0	95.0	12.8	90.00	-4,886.4	-1,163.9	1,206.3	1,098.5	107.84	11.186	
12,700.0	7,311.0	7,345.0	7,345.0	96.8	12.8	90.00	-4,886.4	-1,163.9	1,243.4	1,133.9	109.58	11.347	
12,800.0	7,311.0	7,345.0	7,345.0	98.5	12.8	90.00	-4,886.4	-1,163.9	1,287.3	1,175.9	111.32	11.563	
12,900.0	7,311.0	7,345.0	7,345.0	100.3	12.8	90.00	-4,886.4	-1,163.9	1,337.1	1,224.1	113.06	11.826	
13,000.0	7,311.0	7,345.0	7,345.0	102.0	12.8	90.00	-4,886.4	-1,163.9	1,392.4	1,277.6	114.80	12.129	
13,100.0	7,311.0	7,345.0	7,345.0	103.7	12.8	90.00	-4,886.4	-1,163.9	1,452.5	1,336.0	116.54	12.463	
13,200.0	7,311.0	7,345.0	7,345.0	105.5	12.8	90.00	-4,886.4	-1,163.9	1,516.8	1,398.5	118.29	12.823	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - ALFRED SATER UNIT 2 (EXISTING) - KMG WELL - KMG WELL

Offset Site Error: 0.0 ft

Survey Program: 100-Gyro

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,700.0	7,311.0	7,323.7	7,322.4	62.2	6.4	-90.25	-4,277.6	1,208.5	1,538.4	1,469.9	68.56	22.441	
10,800.0	7,311.0	7,321.4	7,320.1	63.9	6.4	-90.14	-4,277.6	1,208.4	1,482.8	1,412.5	70.27	21.100	
10,900.0	7,311.0	7,319.1	7,317.8	65.6	6.4	-90.04	-4,277.7	1,208.4	1,431.9	1,359.9	71.99	19.890	
11,000.0	7,311.0	7,316.8	7,315.5	67.3	6.4	-89.93	-4,277.7	1,208.4	1,386.4	1,312.7	73.71	18.809	
11,069.7	7,311.0	7,315.2	7,313.9	68.5	6.4	-89.86	-4,277.8	1,208.4	1,358.2	1,283.3	74.91	18.131	
11,100.0	7,311.0	7,314.5	7,313.2	69.1	6.4	-89.82	-4,277.8	1,208.3	1,346.8	1,271.3	75.43	17.854	
11,196.4	7,311.0	7,312.3	7,311.0	70.7	6.4	-89.72	-4,277.8	1,208.3	1,313.4	1,236.4	77.08	17.041	
11,200.0	7,311.0	7,312.2	7,310.9	70.8	6.4	-89.72	-4,277.9	1,208.3	1,312.3	1,235.2	77.14	17.012	
11,300.0	7,311.0	7,309.9	7,308.6	72.5	6.4	-89.61	-4,277.9	1,208.3	1,283.9	1,205.0	78.86	16.280	
11,400.0	7,311.0	7,307.6	7,306.3	74.2	6.4	-89.51	-4,278.0	1,208.3	1,262.8	1,182.2	80.59	15.670	
11,500.0	7,311.0	7,305.4	7,304.1	76.0	6.4	-89.41	-4,278.0	1,208.2	1,249.3	1,167.0	82.31	15.178	
11,600.0	7,311.0	7,303.1	7,301.8	77.7	6.4	-89.30	-4,278.1	1,208.2	1,243.8	1,159.8	84.04	14.800	
11,618.9	7,311.0	7,302.7	7,301.4	78.0	6.4	-89.28	-4,278.1	1,208.2	1,243.7	1,159.3	84.37	14.741	CC, ES
11,700.0	7,311.0	7,300.0	7,298.7	79.4	6.4	-89.16	-4,278.1	1,208.2	1,246.3	1,160.5	85.77	14.531	
11,800.0	7,311.0	7,298.6	7,297.3	81.2	6.4	-89.09	-4,278.2	1,208.1	1,256.8	1,169.3	87.49	14.364	
11,900.0	7,311.0	7,296.4	7,295.1	82.9	6.4	-88.99	-4,278.2	1,208.1	1,275.0	1,185.8	89.22	14.290	SF
12,000.0	7,311.0	7,294.1	7,292.8	84.6	6.4	-88.88	-4,278.3	1,208.1	1,300.7	1,209.7	90.95	14.301	
12,100.0	7,311.0	7,291.8	7,290.5	86.4	6.4	-88.78	-4,278.3	1,208.1	1,333.4	1,240.7	92.68	14.387	
12,200.0	7,311.0	7,289.5	7,288.2	88.1	6.4	-88.67	-4,278.4	1,208.0	1,372.6	1,278.2	94.41	14.539	
12,300.0	7,311.0	7,287.2	7,286.0	89.8	6.4	-88.57	-4,278.4	1,208.0	1,417.8	1,321.7	96.14	14.747	
12,400.0	7,311.0	7,285.0	7,283.7	91.6	6.4	-88.46	-4,278.5	1,208.0	1,468.5	1,370.6	97.87	15.004	
12,500.0	7,311.0	7,282.7	7,281.4	93.3	6.4	-88.36	-4,278.5	1,208.0	1,524.0	1,424.4	99.60	15.301	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,100.0	7,311.0	7,827.7	7,745.2	86.4	16.0	-153.00	-6,259.6	181.4	1,544.6	1,491.8	52.78	29.263	
12,200.0	7,311.0	7,811.8	7,729.8	88.1	16.0	-151.77	-6,263.3	183.5	1,448.5	1,393.3	55.20	26.242	
12,300.0	7,311.0	7,800.0	7,718.4	89.8	15.9	-150.80	-6,266.0	185.0	1,352.7	1,295.4	57.31	23.604	
12,400.0	7,311.0	7,779.1	7,698.3	91.6	15.9	-148.97	-6,270.9	187.8	1,257.2	1,196.6	60.63	20.736	
12,500.0	7,311.0	7,761.7	7,681.6	93.3	15.8	-147.32	-6,275.1	190.2	1,162.1	1,098.3	63.77	18.224	
12,600.0	7,311.0	7,743.6	7,664.3	95.0	15.7	-145.48	-6,279.6	192.7	1,067.5	1,000.3	67.24	15.876	
12,700.0	7,311.0	7,724.7	7,646.2	96.8	15.6	-143.39	-6,284.3	195.4	973.6	902.5	71.09	13.695	
12,800.0	7,311.0	7,700.0	7,622.6	98.5	15.5	-140.42	-6,290.7	199.1	880.4	804.2	76.18	11.557	
12,900.0	7,311.0	7,684.3	7,607.6	100.3	15.5	-138.37	-6,294.9	201.4	788.1	708.1	80.05	9.846	
13,000.0	7,311.0	7,662.6	7,587.0	102.0	15.4	-135.32	-6,300.7	204.7	697.3	612.0	85.22	8.182	
13,100.0	7,311.0	7,640.0	7,565.5	103.7	15.3	-131.86	-6,307.0	208.3	608.2	517.4	90.86	6.694	
13,200.0	7,311.0	7,616.2	7,543.0	105.5	15.2	-127.90	-6,313.7	212.1	522.0	425.0	96.94	5.385	
13,300.0	7,311.0	7,591.2	7,519.4	107.2	15.1	-123.41	-6,320.9	216.2	439.9	336.6	103.34	4.257	
13,400.0	7,311.0	7,564.9	7,494.7	109.0	15.0	-118.33	-6,328.7	220.6	364.8	254.9	109.88	3.320	
13,500.0	7,311.0	7,537.3	7,468.8	110.7	14.9	-112.65	-6,337.1	225.4	301.7	185.4	116.25	2.595	
13,600.0	7,311.0	7,508.1	7,441.7	112.4	14.7	-106.41	-6,346.2	230.5	259.1	137.1	122.04	2.124	
13,681.9	7,311.0	7,483.1	7,418.4	113.9	14.6	-100.93	-6,354.3	235.1	247.2	121.2	126.00	1.962	CC
13,700.0	7,311.0	7,477.4	7,413.1	114.2	14.6	-99.69	-6,356.1	236.1	247.8	121.1	126.74	1.955	ES, SF
13,800.0	7,311.0	7,444.9	7,383.1	115.9	14.5	-92.65	-6,366.8	242.2	271.3	141.4	129.92	2.088	
13,900.0	7,311.0	7,410.6	7,351.5	117.7	14.3	-85.53	-6,378.5	248.8	321.7	190.5	131.26	2.451	
14,000.0	7,311.0	7,374.3	7,318.2	119.4	14.1	-78.55	-6,391.2	256.0	388.6	257.8	130.74	2.972	
14,100.0	7,311.0	7,335.8	7,283.1	121.2	14.0	-71.92	-6,405.0	263.8	464.5	336.0	128.57	3.613	
14,200.0	7,311.0	7,298.0	7,248.9	122.9	13.8	-66.24	-6,418.9	271.7	545.7	420.1	125.55	4.346	
14,300.0	7,311.0	7,260.9	7,215.3	124.7	13.6	-61.36	-6,432.5	279.4	630.1	507.9	122.18	5.157	
14,400.0	7,311.0	7,223.9	7,181.7	126.4	13.5	-57.12	-6,446.1	287.1	716.6	597.9	118.67	6.039	
14,500.0	7,311.0	7,186.9	7,148.2	128.1	13.3	-53.43	-6,459.7	294.9	804.5	689.3	115.21	6.983	
14,600.0	7,311.0	7,149.8	7,114.6	129.9	13.2	-50.23	-6,473.4	302.6	893.4	781.5	111.93	7.982	
14,700.0	7,311.0	7,112.8	7,081.0	131.6	13.0	-47.42	-6,487.0	310.3	983.1	874.2	108.88	9.029	
14,800.0	7,311.0	7,075.7	7,047.4	133.4	12.9	-44.97	-6,500.6	318.0	1,073.3	967.2	106.08	10.118	
14,900.0	7,311.0	7,043.2	7,017.9	135.1	12.7	-43.05	-6,512.6	324.8	1,163.9	1,060.0	103.98	11.194	
15,000.0	7,311.0	7,018.5	6,995.5	136.9	12.6	-41.71	-6,521.4	329.8	1,255.2	1,152.5	102.76	12.215	
15,087.3	7,311.0	7,000.0	6,978.5	138.4	12.6	-40.76	-6,527.9	333.5	1,335.4	1,233.4	102.01	13.091	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 690-MWD

Offset Well Error: 0.0 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,100.0	7,311.0	7,810.2	7,734.3	86.4	15.8	-152.29	-6,266.3	181.7	1,548.5	1,494.8	53.63	28.873	
12,200.0	7,311.0	7,791.4	7,716.2	88.1	15.8	-150.80	-6,270.5	183.9	1,452.2	1,395.8	56.39	25.753	
12,300.0	7,311.0	7,782.7	7,707.7	89.8	15.7	-150.06	-6,272.5	184.9	1,356.2	1,298.0	58.22	23.295	
12,400.0	7,311.0	7,768.0	7,693.5	91.6	15.7	-148.76	-6,276.0	186.6	1,260.6	1,199.7	60.84	20.719	
12,500.0	7,311.0	7,752.2	7,678.3	93.3	15.6	-147.27	-6,279.8	188.5	1,165.4	1,101.6	63.77	18.276	
12,600.0	7,311.0	7,735.2	7,661.9	95.0	15.6	-145.56	-6,284.0	190.5	1,070.6	1,003.6	67.04	15.969	
12,700.0	7,311.0	7,717.0	7,644.5	96.8	15.5	-143.61	-6,288.6	192.7	976.5	905.8	70.71	13.810	
12,800.0	7,311.0	7,697.3	7,625.6	98.5	15.4	-141.31	-6,293.8	195.1	883.1	808.3	74.89	11.792	
12,900.0	7,311.0	7,680.6	7,609.7	100.3	15.3	-139.22	-6,298.3	197.1	790.8	712.0	78.81	10.034	
13,000.0	7,311.0	7,661.3	7,591.4	102.0	15.3	-136.62	-6,303.8	199.5	699.8	616.4	83.43	8.387	
13,100.0	7,311.0	7,637.0	7,568.4	103.7	15.2	-133.05	-6,311.0	202.5	610.6	521.3	89.26	6.841	
13,200.0	7,311.0	7,611.3	7,544.0	105.5	15.1	-128.87	-6,318.7	205.9	523.9	428.2	95.67	5.476	
13,300.0	7,311.0	7,583.4	7,517.7	107.2	14.9	-123.89	-6,327.2	209.6	440.9	338.3	102.69	4.294	
13,400.0	7,311.0	7,559.0	7,494.8	109.0	14.8	-119.18	-6,334.9	212.9	364.3	255.4	108.93	3.344	
13,500.0	7,311.0	7,533.8	7,471.3	110.7	14.7	-114.00	-6,343.5	216.4	299.1	184.0	115.03	2.600	
13,600.0	7,311.0	7,503.3	7,443.4	112.4	14.6	-107.45	-6,354.8	221.0	253.4	132.1	121.25	2.090	
13,696.4	7,311.0	7,466.4	7,409.8	114.1	14.4	-99.29	-6,368.9	226.7	237.3	110.6	126.61	1.874	CC
13,700.0	7,311.0	7,465.0	7,408.6	114.2	14.4	-98.99	-6,369.4	226.9	237.3	110.5	126.77	1.872	ES, SF
13,800.0	7,311.0	7,427.4	7,374.2	115.9	14.2	-90.64	-6,383.6	232.7	255.9	126.1	129.79	1.971	
13,900.0	7,311.0	7,385.1	7,335.7	117.7	14.0	-81.73	-6,399.8	239.1	302.7	172.7	130.06	2.328	
14,000.0	7,311.0	7,347.5	7,301.4	119.4	13.9	-74.43	-6,414.3	244.7	367.0	238.7	128.35	2.859	
14,100.0	7,311.0	7,312.7	7,269.6	121.2	13.7	-68.32	-6,427.4	249.6	441.5	315.9	125.60	3.515	
14,200.0	7,311.0	7,282.9	7,242.0	122.9	13.6	-63.54	-6,438.2	253.7	522.3	399.5	122.80	4.253	
14,300.0	7,311.0	7,252.3	7,213.6	124.7	13.5	-59.13	-6,448.8	257.7	607.0	487.5	119.51	5.079	
14,400.0	7,311.0	7,221.6	7,185.0	126.4	13.4	-55.17	-6,459.2	261.7	694.3	578.2	116.06	5.982	
14,500.0	7,311.0	7,190.1	7,155.6	128.1	13.3	-51.56	-6,469.8	265.8	783.3	670.8	112.48	6.964	
14,600.0	7,311.0	7,127.4	7,097.4	129.9	13.0	-45.58	-6,491.4	273.9	873.2	768.5	104.61	8.347	
14,700.0	7,311.0	7,072.7	7,047.2	131.6	12.8	-41.45	-6,512.2	280.9	962.3	863.5	98.83	9.737	
14,800.0	7,311.0	7,045.9	7,022.7	133.4	12.7	-39.71	-6,522.3	284.3	1,052.1	955.3	96.86	10.862	
14,900.0	7,311.0	7,022.4	7,001.0	135.1	12.7	-38.28	-6,530.9	287.1	1,142.8	1,047.4	95.33	11.988	
15,000.0	7,311.0	7,001.2	6,981.3	136.9	12.6	-37.06	-6,538.4	289.5	1,234.2	1,140.1	94.08	13.118	
15,087.3	7,311.0	6,984.3	6,965.5	138.4	12.5	-36.13	-6,544.1	291.3	1,314.7	1,221.5	93.21	14.105	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,200.0	7,311.0	6,914.8	6,791.0	105.5	16.5	-18.88	-7,272.8	203.0	1,528.3	1,480.3	47.96	31.863	
13,300.0	7,311.0	6,954.5	6,826.9	107.2	16.7	-19.49	-7,288.5	197.4	1,436.7	1,387.1	49.60	28.963	
13,400.0	7,311.0	6,994.1	6,862.8	109.0	17.0	-20.18	-7,304.3	191.8	1,345.1	1,293.7	51.42	26.160	
13,500.0	7,311.0	7,033.7	6,898.7	110.7	17.2	-20.96	-7,320.1	186.2	1,253.6	1,200.1	53.45	23.455	
13,600.0	7,311.0	7,073.4	6,934.6	112.4	17.5	-21.87	-7,335.9	180.6	1,162.1	1,106.4	55.73	20.851	
13,700.0	7,311.0	7,113.0	6,970.5	114.2	17.8	-22.92	-7,351.7	175.0	1,070.7	1,012.3	58.34	18.352	
13,800.0	7,311.0	7,152.6	7,006.5	115.9	18.0	-24.16	-7,367.5	169.4	979.3	918.0	61.35	15.962	
13,900.0	7,311.0	7,192.3	7,042.4	117.7	18.3	-25.63	-7,383.2	163.8	888.1	823.2	64.88	13.688	
14,000.0	7,311.0	7,231.9	7,078.3	119.4	18.5	-27.42	-7,399.0	158.2	797.0	727.9	69.07	11.538	
14,100.0	7,311.0	7,271.5	7,114.2	121.2	18.8	-29.63	-7,414.8	152.6	706.0	631.9	74.13	9.524	
14,200.0	7,311.0	7,311.1	7,150.1	122.9	19.1	-32.41	-7,430.6	147.0	615.4	535.0	80.36	7.658	
14,300.0	7,311.0	7,352.7	7,187.8	124.7	19.4	-36.21	-7,447.1	141.1	525.1	436.5	88.51	5.932	
14,400.0	7,311.0	7,397.4	7,228.6	126.4	19.6	-41.89	-7,464.5	134.9	435.0	335.1	99.95	4.352	
14,500.0	7,311.0	7,439.3	7,266.9	128.1	19.9	-49.53	-7,480.1	129.4	345.7	231.7	114.01	3.032	
14,600.0	7,311.0	7,478.4	7,303.1	129.9	20.1	-59.80	-7,494.3	124.3	258.5	128.5	130.03	1.988	
14,700.0	7,311.0	7,515.1	7,337.1	131.6	20.4	-73.16	-7,507.2	119.8	177.3	32.3	145.02	1.223	Level 2
14,800.0	7,311.0	7,549.5	7,369.2	133.4	20.6	-89.05	-7,518.9	115.6	116.7	-36.5	153.15	0.762	Level 1
14,850.4	7,311.0	7,566.0	7,384.7	134.3	20.6	-97.39	-7,524.4	113.7	106.5	-46.4	152.96	0.697	Level 1, CC, ES, SF
14,900.0	7,311.0	7,581.9	7,399.6	135.1	20.7	-105.39	-7,529.6	111.8	116.4	-33.4	149.88	0.777	Level 1
15,000.0	7,311.0	7,612.4	7,428.3	136.9	20.9	-119.76	-7,539.4	108.3	177.4	39.9	137.50	1.290	Level 3
15,087.3	7,311.0	7,637.6	7,452.1	138.4	21.0	-129.81	-7,547.2	105.6	248.9	124.9	124.04	2.007	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,500.0	7,311.0	7,374.0	7,172.7	110.7	21.6	-20.30	-7,612.2	82.5	1,453.1	1,399.6	53.55	27.136	
13,600.0	7,311.0	7,394.6	7,193.1	112.4	21.7	-22.12	-7,615.0	81.5	1,354.2	1,296.7	57.44	23.576	
13,700.0	7,311.0	7,413.8	7,212.1	114.2	21.7	-24.18	-7,617.5	80.6	1,255.1	1,193.2	61.90	20.277	
13,800.0	7,311.0	7,431.7	7,229.8	115.9	21.8	-26.54	-7,619.8	79.8	1,156.1	1,089.1	67.02	17.250	
13,900.0	7,311.0	7,448.4	7,246.4	117.7	21.8	-29.25	-7,621.9	79.1	1,057.0	984.1	72.89	14.502	
14,000.0	7,311.0	7,464.1	7,262.0	119.4	21.8	-32.35	-7,623.8	78.4	957.9	878.3	79.59	12.036	
14,100.0	7,311.0	7,478.8	7,276.6	121.2	21.9	-35.93	-7,625.5	77.8	858.9	771.7	87.19	9.850	
14,200.0	7,311.0	7,492.6	7,290.3	122.9	21.9	-40.07	-7,627.0	77.2	759.8	664.1	95.73	7.937	
14,300.0	7,311.0	7,505.7	7,303.3	124.7	21.9	-44.84	-7,628.4	76.7	660.8	555.7	105.15	6.285	
14,400.0	7,311.0	7,518.0	7,315.5	126.4	22.0	-50.31	-7,629.7	76.3	561.9	446.7	115.26	4.875	
14,500.0	7,311.0	7,529.6	7,327.1	128.1	22.0	-56.52	-7,630.9	75.8	463.2	337.5	125.70	3.685	
14,600.0	7,311.0	7,540.6	7,338.0	129.9	22.0	-63.46	-7,632.0	75.4	365.0	229.2	135.83	2.687	
14,700.0	7,311.0	7,551.1	7,348.4	131.6	22.0	-71.02	-7,633.1	75.1	267.6	122.8	144.82	1.848	
14,800.0	7,311.0	7,561.0	7,358.3	133.4	22.1	-78.99	-7,634.0	74.7	172.7	20.9	151.81	1.138	Level 2
14,900.0	7,311.0	7,570.4	7,367.7	135.1	22.1	-87.08	-7,634.9	74.4	88.7	-67.4	156.13	0.568	Level 1
14,960.8	7,311.0	7,576.0	7,373.2	136.2	22.1	-91.91	-7,635.4	74.3	64.8	-92.5	157.33	0.412	Level 1, CC, ES, SF
15,000.0	7,311.0	7,579.4	7,376.6	136.9	22.1	-94.97	-7,635.7	74.1	75.7	-81.9	157.56	0.480	Level 1
15,087.3	7,311.0	7,586.9	7,384.1	138.4	22.1	-101.48	-7,636.4	73.9	141.8	-14.9	156.65	0.905	Level 1

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 735-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,400.0	7,311.0	7,366.8	7,206.9	109.0	21.2	-24.12	-7,596.6	82.4	1,532.7	1,473.4	59.37	25.816	
13,500.0	7,311.0	7,384.0	7,223.9	110.7	21.3	-26.43	-7,598.5	82.1	1,433.4	1,369.2	64.18	22.332	
13,600.0	7,311.0	7,398.7	7,238.6	112.4	21.3	-28.79	-7,600.0	81.8	1,334.0	1,264.8	69.22	19.273	
13,700.0	7,311.0	7,412.0	7,251.8	114.2	21.3	-31.29	-7,601.3	81.5	1,234.7	1,160.1	74.57	16.558	
13,800.0	7,311.0	7,425.1	7,264.8	115.9	21.4	-34.19	-7,602.6	81.2	1,135.3	1,054.6	80.70	14.068	
13,900.0	7,311.0	7,439.2	7,278.9	117.7	21.4	-37.93	-7,603.9	80.8	1,036.0	947.6	88.32	11.729	
14,000.0	7,311.0	7,452.1	7,291.7	119.4	21.4	-42.03	-7,605.0	80.6	936.6	840.2	96.46	9.710	
14,100.0	7,311.0	7,462.6	7,302.2	121.2	21.5	-46.00	-7,605.9	80.3	837.3	733.1	104.19	8.036	
14,200.0	7,311.0	7,472.5	7,312.0	122.9	21.5	-50.30	-7,606.8	80.1	738.0	625.9	112.16	6.580	
14,300.0	7,311.0	7,481.9	7,321.4	124.7	21.5	-54.99	-7,607.5	80.0	638.9	518.6	120.29	5.311	
14,400.0	7,311.0	7,491.1	7,330.6	126.4	21.5	-60.22	-7,608.3	79.8	539.9	411.4	128.52	4.201	
14,500.0	7,311.0	7,499.9	7,339.4	128.1	21.5	-65.85	-7,608.9	79.6	441.2	304.9	136.33	3.236	
14,600.0	7,311.0	7,508.2	7,347.7	129.9	21.6	-71.65	-7,609.6	79.5	343.1	199.9	143.20	2.396	
14,700.0	7,311.0	7,516.1	7,355.5	131.6	21.6	-77.53	-7,610.1	79.4	246.3	97.5	148.84	1.655	
14,800.0	7,311.0	7,523.2	7,362.6	133.4	21.6	-83.19	-7,610.6	79.2	153.3	0.3	153.01	1.002	Level 2
14,900.0	7,311.0	7,530.2	7,369.6	135.1	21.6	-88.83	-7,611.1	79.1	79.0	-76.8	155.79	0.507	Level 1
14,936.8	7,311.0	7,532.7	7,372.1	135.8	21.6	-90.88	-7,611.3	79.1	69.9	-86.5	156.46	0.447	Level 1, CC, ES, SF
15,000.0	7,311.0	7,537.0	7,376.3	136.9	21.6	-94.37	-7,611.6	79.0	94.2	-63.0	157.17	0.599	Level 1
15,087.3	7,311.0	7,542.8	7,382.1	138.4	21.6	-99.04	-7,612.0	79.0	165.7	8.4	157.29	1.054	Level 2

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**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
14,600.0	7,311.0	7,090.5	6,977.9	129.9	16.6	-74.58	-7,539.4	1,473.7	1,546.3	1,406.0	140.32	11.020	
14,700.0	7,311.0	7,113.2	6,998.8	131.6	16.7	-75.39	-7,547.1	1,478.2	1,530.9	1,388.3	142.61	10.735	
14,800.0	7,311.0	7,135.0	7,018.9	133.4	16.8	-76.16	-7,554.4	1,482.7	1,521.5	1,376.6	144.87	10.502	
14,900.0	7,311.0	7,161.3	7,043.0	135.1	17.0	-77.10	-7,563.2	1,488.4	1,518.1	1,370.8	147.23	10.311	
14,908.7	7,311.0	7,164.9	7,046.3	135.3	17.0	-77.23	-7,564.4	1,489.1	1,518.0	1,370.6	147.46	10.295	CC
15,000.0	7,311.0	7,206.7	7,085.0	136.9	17.3	-78.72	-7,577.7	1,497.9	1,520.4	1,370.4	149.99	10.137	ES
15,087.3	7,311.0	7,241.4	7,117.4	138.4	17.5	-79.97	-7,587.7	1,504.9	1,527.0	1,374.8	152.22	10.032	SF

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - DIER 4-8 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 100-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,300.0	7,311.0	7,383.2	7,382.3	107.2	12.9	-90.02	-7,065.1	1,045.1	1,518.6	1,398.5	120.09	12.645	
13,400.0	7,311.0	7,383.1	7,382.2	109.0	12.9	-90.01	-7,065.1	1,045.1	1,447.6	1,325.7	121.84	11.881	
13,500.0	7,311.0	7,382.9	7,382.0	110.7	12.9	-90.00	-7,065.1	1,045.1	1,380.1	1,256.5	123.58	11.168	
13,600.0	7,311.0	7,382.8	7,381.9	112.4	12.9	-90.00	-7,065.1	1,045.1	1,316.8	1,191.5	125.32	10.508	
13,700.0	7,311.0	7,382.7	7,381.8	114.2	12.9	-89.99	-7,065.1	1,045.1	1,258.3	1,131.2	127.06	9.903	
13,800.0	7,311.0	7,382.6	7,381.7	115.9	12.9	-89.98	-7,065.1	1,045.1	1,205.2	1,076.4	128.81	9.357	
13,900.0	7,311.0	7,382.4	7,381.5	117.7	12.9	-89.97	-7,065.1	1,045.1	1,158.4	1,027.8	130.55	8.873	
14,000.0	7,311.0	7,382.3	7,381.4	119.4	12.9	-89.97	-7,065.1	1,045.1	1,118.5	986.2	132.29	8.455	
14,100.0	7,311.0	7,382.2	7,381.3	121.2	12.9	-89.96	-7,065.1	1,045.1	1,086.5	952.4	134.04	8.106	
14,200.0	7,311.0	7,382.0	7,381.1	122.9	12.9	-89.95	-7,065.1	1,045.1	1,062.9	927.1	135.78	7.828	
14,300.0	7,311.0	7,381.9	7,381.0	124.7	12.9	-89.95	-7,065.1	1,045.1	1,048.3	910.8	137.53	7.623	
14,400.0	7,311.0	7,381.8	7,380.9	126.4	12.9	-89.94	-7,065.1	1,045.1	1,043.2	903.9	139.27	7.490	
14,403.6	7,311.0	7,381.8	7,380.9	126.5	12.9	-89.94	-7,065.1	1,045.1	1,043.2	903.9	139.34	7.487	CC, ES
14,500.0	7,311.0	7,381.6	7,380.7	128.1	12.9	-89.93	-7,065.1	1,045.1	1,047.6	906.6	141.02	7.429	SF
14,600.0	7,311.0	7,381.5	7,380.6	129.9	12.9	-89.92	-7,065.1	1,045.1	1,061.5	918.8	142.76	7.436	
14,700.0	7,311.0	7,381.4	7,380.5	131.6	12.9	-89.92	-7,065.1	1,045.1	1,084.5	940.0	144.51	7.505	
14,800.0	7,311.0	7,381.2	7,380.3	133.4	12.9	-89.91	-7,065.1	1,045.1	1,116.0	969.7	146.26	7.630	
14,900.0	7,311.0	7,381.1	7,380.2	135.1	12.9	-89.90	-7,065.1	1,045.1	1,155.3	1,007.3	148.00	7.806	
15,000.0	7,311.0	7,381.0	7,380.1	136.9	12.9	-89.89	-7,065.1	1,045.1	1,201.7	1,051.9	149.75	8.024	
15,087.3	7,311.0	7,380.9	7,380.0	138.4	12.9	-89.89	-7,065.1	1,045.1	1,247.3	1,096.0	151.27	8.245	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY #1 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 100-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	13.7	13.7	0.0	0.0	123.09	-314.0	481.8	575.1				
100.0	100.0	112.0	112.0	0.1	0.2	123.07	-313.9	482.1	575.3	575.0	0.30	1,916.097	
200.0	200.0	212.0	212.0	0.3	0.4	123.04	-313.9	482.6	575.7	575.0	0.65	886.451	
300.0	300.0	313.6	313.6	0.5	0.5	123.03	-313.9	482.8	575.9	574.9	1.00	575.147	
400.0	400.0	413.7	413.7	0.6	0.7	123.01	-313.8	483.0	575.9	574.6	1.35	426.413	
500.0	500.0	513.7	513.7	0.8	0.9	122.97	-313.5	483.2	576.0	574.3	1.70	338.840	
600.0	600.0	613.3	613.3	1.0	1.1	122.93	-313.1	483.5	576.0	574.0	2.05	281.234	
700.0	700.0	710.8	710.8	1.2	1.2	122.88	-312.9	484.0	576.4	574.0	2.39	240.843	
800.0	800.0	811.4	811.3	1.3	1.4	122.84	-312.8	484.7	576.9	574.2	2.74	210.287	
900.0	900.0	911.9	911.9	1.5	1.6	122.79	-312.7	485.3	577.3	574.2	3.09	186.625	
1,000.0	1,000.0	1,012.2	1,012.2	1.7	1.8	122.78	-312.7	485.7	577.7	574.2	3.44	167.773	
1,100.0	1,100.0	1,113.3	1,113.3	1.9	1.9	122.78	-312.9	485.9	577.9	574.1	3.79	152.319	
1,200.0	1,200.0	1,216.2	1,216.2	2.0	2.1	122.80	-312.9	485.6	577.7	573.6	4.15	139.278	
1,300.0	1,300.0	1,315.7	1,315.7	2.2	2.3	122.84	-313.1	485.1	577.4	572.9	4.50	128.428	
1,400.0	1,400.0	1,416.5	1,416.5	2.4	2.5	122.87	-313.1	484.7	577.0	572.2	4.85	119.073	
1,500.0	1,500.0	1,518.2	1,518.2	2.6	2.6	122.91	-313.1	483.9	576.4	571.2	5.20	110.891	
1,600.0	1,600.0	1,617.1	1,617.0	2.7	2.8	122.98	-313.4	483.0	575.8	570.2	5.55	103.838	
1,700.0	1,700.0	1,715.9	1,715.9	2.9	3.0	123.06	-313.9	482.2	575.4	569.5	5.89	97.657	
1,800.0	1,800.0	1,816.4	1,816.4	3.1	3.2	123.18	-314.7	481.2	575.0	568.7	6.24	92.112	
1,900.0	1,900.0	1,914.2	1,914.2	3.3	3.3	123.33	-315.8	480.2	574.8	568.2	6.59	87.251	
2,000.0	2,000.0	2,014.8	2,014.8	3.4	3.5	123.49	-317.2	479.3	574.7	567.8	6.94	82.833	
2,100.0	2,100.0	2,117.6	2,117.6	3.6	3.7	123.67	-318.5	478.0	574.4	567.1	7.29	78.751	
2,200.0	2,200.0	2,219.5	2,219.4	3.8	3.9	123.84	-319.3	476.4	573.5	565.9	7.65	75.006	
2,300.0	2,300.0	2,319.2	2,319.1	4.0	4.0	124.00	-320.2	474.8	572.7	564.7	8.00	71.621	
2,400.0	2,400.0	2,421.7	2,421.6	4.1	4.2	124.14	-320.7	472.9	571.5	563.1	8.35	68.438	
2,500.0	2,500.0	2,520.8	2,520.7	4.3	4.4	124.27	-321.1	471.2	570.3	561.6	8.70	65.561	
2,600.0	2,600.0	2,623.3	2,623.2	4.5	4.6	124.39	-321.3	469.4	568.9	559.8	9.05	62.837	
2,700.0	2,700.0	2,723.0	2,722.9	4.7	4.7	124.50	-321.2	467.4	567.2	557.8	9.40	60.331	
2,800.0	2,800.0	2,821.4	2,821.2	4.8	4.9	124.59	-321.2	465.8	565.8	556.1	9.75	58.041	
2,900.0	2,900.0	2,920.8	2,920.6	5.0	5.1	124.67	-321.2	464.4	564.7	554.6	10.10	55.922	
3,000.0	3,000.0	3,022.4	3,022.2	5.2	5.3	124.72	-320.8	463.0	563.3	552.8	10.45	53.907	
3,100.0	3,100.0	3,121.1	3,120.9	5.4	5.4	124.75	-320.3	461.7	562.0	551.2	10.80	52.051	
3,200.0	3,200.0	3,219.5	3,219.3	5.5	5.6	124.74	-319.6	460.9	560.9	549.7	11.14	50.338	
3,300.0	3,300.0	3,318.0	3,317.8	5.7	5.8	124.70	-318.8	460.4	560.1	548.6	11.49	48.752	
3,400.0	3,400.0	3,416.6	3,416.3	5.9	6.0	124.68	-318.3	460.1	559.5	547.7	11.83	47.281	
3,500.0	3,500.0	3,516.5	3,516.2	6.1	6.1	124.65	-317.9	459.9	559.1	546.9	12.18	45.894	
3,600.0	3,600.0	3,616.3	3,616.1	6.2	6.3	124.64	-317.6	459.7	558.8	546.2	12.53	44.590	
3,700.0	3,700.0	3,718.7	3,718.4	6.4	6.5	124.63	-317.2	459.2	558.2	545.3	12.88	43.321	
3,800.0	3,800.0	3,819.3	3,819.1	6.6	6.7	124.65	-316.8	458.4	557.3	544.0	13.23	42.108	
3,900.0	3,900.0	3,918.5	3,918.3	6.8	6.8	124.68	-316.6	457.6	556.4	542.9	13.58	40.969	
4,000.0	4,000.0	4,018.9	4,018.6	6.9	7.0	124.74	-316.6	456.6	555.7	541.7	13.93	39.884	
4,059.4	4,059.4	4,079.5	4,079.2	7.0	7.1	125.92	-316.6	455.9	555.4	541.3	14.14	39.276 CC	
4,100.0	4,100.0	4,120.4	4,120.1	7.1	7.2	126.03	-316.6	455.4	555.5	541.3	14.28	38.895 ES	
4,200.0	4,199.9	4,220.0	4,219.7	7.3	7.4	126.48	-316.7	454.0	557.1	542.5	14.63	38.084	
4,300.0	4,299.6	4,319.8	4,319.5	7.5	7.5	127.15	-317.0	452.5	560.6	545.6	14.97	37.439	
4,321.5	4,321.0	4,341.4	4,341.1	7.5	7.6	127.33	-317.0	452.2	561.6	546.5	15.05	37.320	
4,400.0	4,399.1	4,420.0	4,419.8	7.6	7.7	128.02	-317.2	451.0	565.4	550.0	15.33	36.887	
4,500.0	4,498.7	4,520.0	4,519.7	7.8	7.9	128.88	-317.1	449.5	570.1	554.5	15.68	36.353	
4,600.0	4,598.2	4,618.4	4,618.1	8.0	8.1	129.70	-317.1	448.1	575.2	559.1	16.04	35.863	
4,700.0	4,697.7	4,718.7	4,718.4	8.2	8.2	130.53	-317.2	446.6	580.3	563.9	16.40	35.387	
4,800.0	4,797.3	4,816.3	4,816.0	8.4	8.4	131.32	-317.3	445.3	585.7	569.0	16.75	34.961	
4,900.0	4,896.8	4,918.9	4,918.6	8.6	8.6	132.12	-317.2	444.0	591.0	573.9	17.12	34.526	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY #1 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 100-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,996.3	5,018.0	5,017.6	8.8	8.8	132.87	-316.8	442.6	596.3	578.8	17.48	34.117	
5,100.0	5,095.9	5,117.4	5,117.1	9.0	8.9	133.57	-316.3	441.4	601.7	583.9	17.84	33.730	
5,200.0	5,195.4	5,215.2	5,214.8	9.2	9.1	134.25	-315.9	440.4	607.4	589.2	18.20	33.378	
5,300.0	5,294.9	5,315.3	5,314.9	9.4	9.3	134.94	-315.5	439.5	613.3	594.7	18.56	33.043	SF
5,400.0	5,394.5	5,350.0	5,349.6	9.6	9.4	135.17	-315.3	439.2	622.5	603.7	18.81	33.095	
5,500.0	5,494.0	5,350.0	5,349.6	9.8	9.4	135.17	-315.3	439.2	646.4	627.4	19.00	34.016	
5,600.0	5,593.5	5,350.0	5,349.6	10.0	9.4	135.17	-315.3	439.2	684.2	665.0	19.20	35.642	
5,700.0	5,693.1	5,350.0	5,349.6	10.3	9.4	135.17	-315.3	439.2	733.7	714.4	19.39	37.843	
5,800.0	5,792.6	5,350.0	5,349.6	10.5	9.4	135.17	-315.3	439.2	792.9	773.3	19.58	40.487	
5,900.0	5,892.1	5,350.0	5,349.6	10.7	9.4	135.17	-315.3	439.2	859.6	839.8	19.78	43.462	
6,000.0	5,991.7	5,350.0	5,349.6	10.9	9.4	135.17	-315.3	439.2	932.3	912.3	19.97	46.676	
6,100.0	6,091.2	5,350.0	5,349.6	11.1	9.4	135.17	-315.3	439.2	1,009.7	989.5	20.17	50.059	
6,200.0	6,190.7	5,350.0	5,349.6	11.3	9.4	135.17	-315.3	439.2	1,090.8	1,070.4	20.37	53.556	
6,300.0	6,290.3	5,350.0	5,349.6	11.5	9.4	135.17	-315.3	439.2	1,174.7	1,154.2	20.56	57.126	
6,400.0	6,389.8	5,350.0	5,349.6	11.8	9.4	135.17	-315.3	439.2	1,261.1	1,240.3	20.76	60.741	
6,500.0	6,489.3	5,350.0	5,349.6	12.0	9.4	135.17	-315.3	439.2	1,349.3	1,328.3	20.96	64.375	
6,600.0	6,588.9	5,350.0	5,349.6	12.2	9.4	135.17	-315.3	439.2	1,439.0	1,417.9	21.16	68.013	
6,694.3	6,682.7	5,350.0	5,349.6	12.4	9.4	135.17	-315.3	439.2	1,524.9	1,503.5	21.35	71.436	
6,700.0	6,688.4	5,350.0	5,349.6	12.4	9.4	136.27	-315.3	439.2	1,530.1	1,508.7	21.35	71.669	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	93.0	93.0	0.0	0.1	153.10	-688.5	349.3	772.0				
100.0	100.0	193.0	193.0	0.1	0.3	153.10	-688.5	349.3	772.0	771.6	0.44	1,748.403	
200.0	200.0	293.0	293.0	0.3	0.5	153.10	-688.5	349.3	772.0	771.2	0.79	976.481	
300.0	300.0	393.0	393.0	0.5	0.7	153.10	-688.5	349.3	772.0	770.9	1.14	677.406	
400.0	400.0	493.0	493.0	0.6	0.8	153.10	-688.5	349.3	772.0	770.6	1.49	518.577	
500.0	500.0	593.0	593.0	0.8	1.0	153.10	-688.5	349.3	772.0	770.2	1.84	420.082	
600.0	600.0	693.0	693.0	1.0	1.2	153.10	-688.5	349.3	772.0	769.9	2.19	353.030	
700.0	700.0	793.0	793.0	1.2	1.4	153.10	-688.5	349.3	772.0	769.5	2.54	304.436	
800.0	800.0	893.0	893.0	1.3	1.5	153.10	-688.5	349.3	772.0	769.2	2.89	267.602	
900.0	900.0	993.0	993.0	1.5	1.7	153.10	-688.5	349.3	772.0	768.8	3.23	238.719	
1,000.0	1,000.0	1,093.0	1,093.0	1.7	1.9	153.10	-688.5	349.3	772.0	768.5	3.58	215.463	
1,100.0	1,100.0	1,193.0	1,193.0	1.9	2.1	153.10	-688.5	349.3	772.0	768.1	3.93	196.337	
1,200.0	1,200.0	1,293.0	1,293.0	2.0	2.2	153.10	-688.5	349.3	772.0	767.8	4.28	180.329	
1,300.0	1,300.0	1,393.0	1,393.0	2.2	2.4	153.10	-688.5	349.3	772.0	767.4	4.63	166.734	
1,400.0	1,400.0	1,493.0	1,493.0	2.4	2.6	153.10	-688.5	349.3	772.0	767.1	4.98	155.046	
1,500.0	1,500.0	1,593.0	1,593.0	2.6	2.8	153.10	-688.5	349.3	772.0	766.7	5.33	144.889	
1,600.0	1,600.0	1,693.0	1,693.0	2.7	2.9	153.10	-688.5	349.3	772.0	766.4	5.68	135.981	
1,700.0	1,700.0	1,793.0	1,793.0	2.9	3.1	153.10	-688.5	349.3	772.0	766.0	6.03	128.105	
1,800.0	1,800.0	1,893.0	1,893.0	3.1	3.3	153.10	-688.5	349.3	772.0	765.7	6.38	121.091	
1,900.0	1,900.0	1,993.0	1,993.0	3.3	3.5	153.10	-688.5	349.3	772.0	765.3	6.72	114.806	
2,000.0	2,000.0	2,093.0	2,093.0	3.4	3.6	153.10	-688.5	349.3	772.0	765.0	7.07	109.140	
2,100.0	2,100.0	2,193.0	2,193.0	3.6	3.8	153.10	-688.5	349.3	772.0	764.6	7.42	104.008	
2,200.0	2,200.0	2,293.0	2,293.0	3.8	4.0	153.10	-688.5	349.3	772.0	764.3	7.77	99.337	
2,300.0	2,300.0	2,393.0	2,393.0	4.0	4.2	153.10	-688.5	349.3	772.0	763.9	8.12	95.067	
2,400.0	2,400.0	2,493.0	2,493.0	4.1	4.3	153.10	-688.5	349.3	772.0	763.6	8.47	91.149	
2,500.0	2,500.0	2,593.0	2,593.0	4.3	4.5	153.10	-688.5	349.3	772.0	763.2	8.82	87.541	
2,600.0	2,600.0	2,693.0	2,693.0	4.5	4.7	153.10	-688.5	349.3	772.0	762.9	9.17	84.208	
2,700.0	2,700.0	2,793.0	2,793.0	4.7	4.9	153.10	-688.5	349.3	772.0	762.5	9.52	81.120	
2,800.0	2,800.0	2,893.0	2,893.0	4.8	5.0	153.10	-688.5	349.3	772.0	762.2	9.87	78.250	
2,900.0	2,900.0	2,993.0	2,993.0	5.0	5.2	153.10	-688.5	349.3	772.0	761.8	10.22	75.576	
3,000.0	3,000.0	3,093.0	3,093.0	5.2	5.4	153.10	-688.5	349.3	772.0	761.5	10.56	73.079	
3,100.0	3,100.0	3,193.0	3,193.0	5.4	5.6	153.10	-688.5	349.3	772.0	761.1	10.91	70.741	
3,200.0	3,200.0	3,293.0	3,293.0	5.5	5.7	153.10	-688.5	349.3	772.0	760.8	11.26	68.549	
3,300.0	3,300.0	3,393.0	3,393.0	5.7	5.9	153.10	-688.5	349.3	772.0	760.4	11.61	66.488	
3,400.0	3,400.0	3,493.0	3,493.0	5.9	6.1	153.10	-688.5	349.3	772.0	760.1	11.96	64.548	
3,500.0	3,500.0	3,593.0	3,593.0	6.1	6.3	153.10	-688.5	349.3	772.0	759.7	12.31	62.717	
3,600.0	3,600.0	3,693.0	3,693.0	6.2	6.4	153.10	-688.5	349.3	772.0	759.4	12.66	60.988	
3,700.0	3,700.0	3,793.0	3,793.0	6.4	6.6	153.10	-688.5	349.3	772.0	759.0	13.01	59.351	
3,800.0	3,800.0	3,893.0	3,893.0	6.6	6.8	153.10	-688.5	349.3	772.0	758.7	13.36	57.800	
3,900.0	3,900.0	3,993.0	3,993.0	6.8	7.0	153.10	-688.5	349.3	772.0	758.3	13.71	56.328	
4,000.0	4,000.0	4,093.0	4,093.0	6.9	7.1	153.10	-688.5	349.3	772.0	758.0	14.06	54.929	
4,100.0	4,100.0	4,193.0	4,193.0	7.1	7.3	154.23	-688.5	349.3	773.4	759.0	14.40	53.705	
4,200.0	4,199.9	4,292.9	4,292.9	7.3	7.5	154.35	-688.5	349.3	777.5	762.7	14.74	52.748	
4,300.0	4,299.6	4,392.6	4,392.6	7.5	7.6	154.53	-688.5	349.3	784.2	769.2	15.07	52.039	
4,321.5	4,321.0	4,414.0	4,414.0	7.5	7.7	154.58	-688.5	349.3	786.1	770.9	15.14	51.917	
4,400.0	4,399.1	4,492.1	4,492.1	7.6	7.8	154.82	-688.5	349.3	792.9	777.5	15.41	51.438	
4,500.0	4,498.7	4,591.7	4,591.7	7.8	8.0	155.11	-688.5	349.3	801.7	785.9	15.77	50.851	
4,600.0	4,598.2	4,691.2	4,691.2	8.0	8.2	155.40	-688.5	349.3	810.4	794.3	16.12	50.289	
4,700.0	4,697.7	4,790.7	4,790.7	8.2	8.3	155.68	-688.5	349.3	819.2	802.8	16.47	49.752	
4,800.0	4,797.3	4,890.3	4,890.3	8.4	8.5	155.95	-688.5	349.3	828.0	811.2	16.82	49.237	
4,900.0	4,896.8	4,989.8	4,989.8	8.6	8.7	156.22	-688.5	349.3	836.9	819.7	17.17	48.743	
5,000.0	4,996.3	5,089.3	5,089.3	8.8	8.9	156.49	-688.5	349.3	845.7	828.2	17.52	48.270	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 0-6-5 (EXISTING) - ENCANA WELL - NO SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,095.9	5,188.9	5,188.9	9.0	9.0	156.74	-688.5	349.3	854.6	836.7	17.87	47.816	
5,200.0	5,195.4	5,288.4	5,288.4	9.2	9.2	157.00	-688.5	349.3	863.5	845.3	18.22	47.380	
5,300.0	5,294.9	5,387.9	5,387.9	9.4	9.4	157.24	-688.5	349.3	872.4	853.8	18.58	46.961	
5,400.0	5,394.5	5,487.5	5,487.5	9.6	9.6	157.49	-688.5	349.3	881.3	862.4	18.93	46.558	
5,500.0	5,494.0	5,587.0	5,587.0	9.8	9.7	157.72	-688.5	349.3	890.2	871.0	19.28	46.171	
5,600.0	5,593.5	5,686.5	5,686.5	10.0	9.9	157.96	-688.5	349.3	899.2	879.6	19.63	45.798	
5,700.0	5,693.1	5,786.1	5,786.1	10.3	10.1	158.19	-688.5	349.3	908.1	888.2	19.99	45.439	
5,800.0	5,792.6	5,885.6	5,885.6	10.5	10.3	158.41	-688.5	349.3	917.1	896.8	20.34	45.093	
5,900.0	5,892.1	5,985.1	5,985.1	10.7	10.4	158.63	-688.5	349.3	926.1	905.4	20.69	44.759	
6,000.0	5,991.7	6,084.7	6,084.7	10.9	10.6	158.85	-688.5	349.3	935.1	914.1	21.04	44.438	
6,100.0	6,091.2	6,184.2	6,184.2	11.1	10.8	159.06	-688.5	349.3	944.1	922.7	21.40	44.127	
6,200.0	6,190.7	6,283.7	6,283.7	11.3	10.9	159.26	-688.5	349.3	953.2	931.4	21.75	43.828	
6,300.0	6,290.3	6,383.3	6,383.3	11.5	11.1	159.47	-688.5	349.3	962.2	940.1	22.10	43.538	
6,400.0	6,389.8	6,482.8	6,482.8	11.8	11.3	159.67	-688.5	349.3	971.3	948.8	22.45	43.258	
6,500.0	6,489.3	6,582.3	6,582.3	12.0	11.5	159.86	-688.5	349.3	980.3	957.5	22.80	42.987	
6,600.0	6,588.9	6,681.9	6,681.9	12.2	11.6	160.06	-688.5	349.3	989.4	966.2	23.16	42.726	
6,694.3	6,682.7	6,775.7	6,775.7	12.4	11.8	160.23	-688.5	349.3	998.0	974.5	23.49	42.486	
6,700.0	6,688.4	6,781.4	6,781.4	12.4	11.8	160.44	-688.5	349.3	998.5	974.9	23.52	42.453	
6,750.0	6,738.3	6,831.3	6,831.3	12.5	11.9	-100.87	-688.5	349.3	1,000.5	976.8	23.72	42.177	
6,800.0	6,788.3	6,881.3	6,881.3	12.6	12.0	-23.12	-688.5	349.3	998.5	974.7	23.82	41.919	
6,850.0	6,837.8	6,930.8	6,930.8	12.6	12.1	-22.61	-688.5	349.3	992.5	968.6	23.81	41.677	
6,900.0	6,886.6	6,979.6	6,979.6	12.6	12.2	-22.95	-688.5	349.3	982.4	958.7	23.71	41.441	
6,950.0	6,934.3	7,027.3	7,027.3	12.6	12.2	-23.71	-688.5	349.3	968.5	945.0	23.51	41.196	
7,000.0	6,980.4	7,073.4	7,073.4	12.6	12.3	-24.86	-688.5	349.3	950.8	927.6	23.24	40.916	
7,050.0	7,024.8	7,117.8	7,117.8	12.6	12.4	-26.40	-688.5	349.3	929.5	906.6	22.92	40.565	
7,100.0	7,066.9	7,159.9	7,159.9	12.6	12.5	-28.40	-688.5	349.3	904.9	882.3	22.57	40.087	
7,150.0	7,106.5	7,199.5	7,199.5	12.5	12.5	-30.94	-688.5	349.3	877.2	854.9	22.26	39.404	
7,200.0	7,143.4	7,236.4	7,236.4	12.6	12.6	-34.10	-688.5	349.3	846.6	824.5	22.04	38.418	
7,250.0	7,177.1	7,270.1	7,270.1	12.6	12.7	-38.02	-688.5	349.3	813.5	791.5	21.97	37.021	
7,300.0	7,207.5	7,300.5	7,300.5	12.7	12.7	-42.80	-688.5	349.3	778.2	756.1	22.15	35.133	
7,350.0	7,234.4	7,327.4	7,327.4	12.8	12.8	-48.52	-688.5	349.3	741.2	718.6	22.63	32.760	
7,400.0	7,257.4	7,350.4	7,350.4	13.0	12.8	-55.15	-688.5	349.3	702.9	679.5	23.40	30.041	
7,450.0	7,276.5	7,369.5	7,369.5	13.2	12.8	-62.51	-688.5	349.3	663.9	639.5	24.38	27.228	
7,500.0	7,291.6	7,384.6	7,384.6	13.5	12.9	-70.20	-688.5	349.3	624.6	599.2	25.41	24.580	
7,550.0	7,302.3	7,395.3	7,395.3	13.8	12.9	-77.69	-688.5	349.3	585.6	559.3	26.32	22.252	
7,600.0	7,308.8	7,401.8	7,401.8	14.2	12.9	-84.43	-688.5	349.3	547.6	520.6	27.02	20.271	
7,649.7	7,311.0	7,404.0	7,404.0	14.6	12.9	-90.00	-688.5	349.3	511.6	484.1	27.53	18.586	
7,700.0	7,311.0	7,404.0	7,404.0	15.1	12.9	-90.00	-688.5	349.3	477.6	449.6	27.99	17.064	
7,800.0	7,311.0	7,404.0	7,404.0	16.1	12.9	-90.00	-688.5	349.3	419.8	390.8	29.02	14.468	
7,900.0	7,311.0	7,404.0	7,404.0	17.3	12.9	-90.00	-688.5	349.3	379.9	349.8	30.16	12.597	
8,000.0	7,311.0	7,404.0	7,404.0	18.5	12.9	-90.00	-688.5	349.3	364.0	332.6	31.40	11.591	
8,009.4	7,311.0	7,404.0	7,404.0	18.6	12.9	-90.00	-688.5	349.3	363.8	332.3	31.52	11.542	CC, ES
8,100.0	7,311.0	7,404.0	7,404.0	19.8	12.9	-90.00	-688.5	349.3	375.0	342.2	32.72	11.461	SF
8,200.0	7,311.0	7,404.0	7,404.0	21.2	12.9	-90.00	-688.5	349.3	410.8	376.7	34.10	12.046	
8,300.0	7,311.0	7,404.0	7,404.0	22.6	12.9	-90.00	-688.5	349.3	465.7	430.1	35.53	13.106	
8,400.0	7,311.0	7,404.0	7,404.0	24.1	12.9	-90.00	-688.5	349.3	533.8	496.8	37.01	14.425	
8,500.0	7,311.0	7,404.0	7,404.0	25.6	12.9	-90.00	-688.5	349.3	610.8	572.3	38.52	15.858	
8,600.0	7,311.0	7,404.0	7,404.0	27.2	12.9	-90.00	-688.5	349.3	693.7	653.6	40.06	17.318	
8,700.0	7,311.0	7,404.0	7,404.0	28.7	12.9	-90.00	-688.5	349.3	780.6	739.0	41.62	18.755	
8,800.0	7,311.0	7,404.0	7,404.0	30.3	12.9	-90.00	-688.5	349.3	870.3	827.1	43.21	20.143	
8,900.0	7,311.0	7,404.0	7,404.0	31.9	12.9	-90.00	-688.5	349.3	962.1	917.3	44.81	21.471	
9,000.0	7,311.0	7,404.0	7,404.0	33.5	12.9	-90.00	-688.5	349.3	1,055.3	1,008.9	46.43	22.731	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,100.0	7,311.0	7,404.0	7,404.0	35.2	12.9	-90.00	-688.5	349.3	1,149.7	1,101.7	48.06	23.923	
9,200.0	7,311.0	7,404.0	7,404.0	36.8	12.9	-90.00	-688.5	349.3	1,245.0	1,195.3	49.70	25.049	
9,300.0	7,311.0	7,404.0	7,404.0	38.4	12.9	-90.00	-688.5	349.3	1,340.9	1,289.6	51.35	26.112	
9,400.0	7,311.0	7,404.0	7,404.0	40.1	12.9	-90.00	-688.5	349.3	1,437.4	1,384.4	53.01	27.114	
9,500.0	7,311.0	7,404.0	7,404.0	41.8	12.9	-90.00	-688.5	349.3	1,534.4	1,479.7	54.68	28.060	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 13-5 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 100-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	153.20	-703.8	355.5	788.5				
100.0	100.0	100.0	100.0	0.1	0.2	153.21	-703.3	355.0	787.8	787.5	0.28	2,819.780	
200.0	200.0	195.3	195.3	0.3	0.3	153.24	-702.6	354.3	786.9	786.3	0.62	1,268.611	
300.0	300.0	299.0	299.0	0.5	0.5	153.29	-702.4	353.5	786.3	785.3	0.98	805.179	
400.0	400.0	393.1	393.1	0.6	0.7	153.35	-702.3	352.4	785.8	784.5	1.32	597.085	
500.0	500.0	495.5	495.5	0.8	0.9	153.45	-702.7	351.1	785.5	783.9	1.67	470.140	
600.0	600.0	598.0	598.0	1.0	1.0	153.54	-702.7	349.7	784.9	782.9	2.02	387.624	
700.0	700.0	693.8	693.7	1.2	1.2	153.62	-702.7	348.5	784.4	782.1	2.37	331.210	
800.0	800.0	796.1	796.1	1.3	1.4	153.75	-703.2	346.8	784.1	781.4	2.72	287.854	
900.0	900.0	897.8	897.7	1.5	1.6	153.88	-703.4	345.0	783.5	780.4	3.08	254.536	
1,000.0	1,000.0	994.0	993.9	1.7	1.7	154.00	-703.7	343.2	783.0	779.5	3.42	228.733	
1,030.5	1,030.5	1,022.6	1,022.5	1.7	1.8	154.04	-703.9	342.7	782.9	779.4	3.53	221.999	
1,100.0	1,100.0	1,087.3	1,087.2	1.9	1.9	154.12	-704.6	341.8	783.1	779.4	3.76	208.142	
1,200.0	1,200.0	1,192.7	1,192.6	2.0	2.1	154.27	-705.9	340.1	783.5	779.4	4.13	189.944	
1,300.0	1,300.0	1,296.9	1,296.8	2.2	2.3	154.44	-706.5	337.9	783.2	778.7	4.48	174.625	
1,361.2	1,361.2	1,353.3	1,353.2	2.3	2.4	154.52	-706.8	336.8	783.0	778.3	4.69	166.907	
1,400.0	1,400.0	1,388.9	1,388.8	2.4	2.4	154.56	-707.1	336.4	783.0	778.2	4.82	162.404	
1,500.0	1,500.0	1,496.8	1,496.6	2.6	2.6	154.70	-707.9	334.7	783.1	777.9	5.19	150.938	
1,563.2	1,563.2	1,555.4	1,555.2	2.7	2.7	154.78	-708.3	333.6	782.9	777.5	5.40	144.933	
1,600.0	1,600.0	1,589.2	1,589.0	2.7	2.8	154.82	-708.6	333.1	783.0	777.4	5.53	141.694	
1,700.0	1,700.0	1,697.6	1,697.4	2.9	3.0	154.97	-709.4	331.2	782.9	777.0	5.89	132.830	
1,800.0	1,800.0	1,798.7	1,798.5	3.1	3.2	155.16	-709.8	328.5	782.2	775.9	6.25	125.143	
1,900.0	1,900.0	1,897.8	1,897.5	3.3	3.3	155.34	-710.1	326.0	781.4	774.8	6.60	118.361	
2,000.0	2,000.0	1,995.9	1,995.6	3.4	3.5	155.52	-710.6	323.6	780.8	773.9	6.95	112.300	
2,100.0	2,100.0	2,094.0	2,093.6	3.6	3.7	155.69	-711.2	321.4	780.5	773.2	7.30	106.890	
2,171.4	2,171.4	2,163.8	2,163.4	3.7	3.8	155.80	-711.8	319.9	780.4	772.8	7.55	103.329	
2,200.0	2,200.0	2,191.7	2,191.3	3.8	3.9	155.86	-712.1	319.2	780.4	772.8	7.65	101.976	
2,300.0	2,300.0	2,290.7	2,290.2	4.0	4.0	156.07	-713.5	316.6	780.6	772.6	8.01	97.495	
2,400.0	2,400.0	2,389.6	2,389.1	4.1	4.2	156.29	-714.9	314.0	780.9	772.5	8.36	93.404	
2,500.0	2,500.0	2,489.3	2,488.8	4.3	4.4	156.51	-716.5	311.4	781.3	772.5	8.72	89.636	
2,600.0	2,600.0	2,587.2	2,586.6	4.5	4.6	156.74	-718.2	308.7	781.8	772.7	9.07	86.213	
2,700.0	2,700.0	2,685.4	2,684.8	4.7	4.8	156.96	-720.2	306.3	782.6	773.2	9.42	83.071	
2,800.0	2,800.0	2,792.4	2,791.7	4.8	5.0	157.20	-722.0	303.5	783.2	773.4	9.79	79.999	
2,900.0	2,900.0	2,889.6	2,888.9	5.0	5.1	157.38	-723.1	301.3	783.3	773.2	10.14	77.270	
3,000.0	3,000.0	2,995.4	2,994.7	5.2	5.3	157.56	-724.1	299.1	783.4	772.9	10.50	74.593	
3,100.0	3,100.0	3,093.9	3,093.1	5.4	5.5	157.70	-724.6	297.2	783.2	772.3	10.85	72.183	
3,200.0	3,200.0	3,195.9	3,195.1	5.5	5.7	157.78	-724.8	296.0	782.9	771.7	11.20	69.887	
3,300.0	3,300.0	3,300.8	3,300.0	5.7	5.9	157.89	-724.6	294.4	782.2	770.6	11.56	67.648	
3,400.0	3,400.0	3,399.3	3,398.5	5.9	6.0	157.99	-724.3	292.8	781.3	769.4	11.91	65.602	
3,500.0	3,500.0	3,500.0	3,499.2	6.1	6.2	158.05	-723.7	291.7	780.3	768.0	12.26	63.653	
3,600.0	3,600.0	3,597.3	3,596.5	6.2	6.4	158.10	-723.2	290.7	779.4	766.8	12.60	61.845	
3,700.0	3,700.0	3,694.2	3,693.4	6.4	6.5	158.21	-723.4	289.2	779.1	766.1	12.95	60.158	
3,720.5	3,720.5	3,713.3	3,712.5	6.4	6.6	158.24	-723.5	288.8	779.0	766.0	13.02	59.834	
3,800.0	3,800.0	3,786.3	3,785.5	6.6	6.7	158.35	-724.3	287.6	779.4	766.1	13.29	58.650	
3,900.0	3,900.0	3,891.8	3,890.9	6.8	6.9	158.53	-725.9	285.5	780.0	766.3	13.65	57.124	
4,000.0	4,000.0	3,991.3	3,990.3	6.9	7.1	158.76	-727.1	282.6	780.1	766.1	14.01	55.684	
4,100.0	4,100.0	4,102.8	4,101.8	7.1	7.3	160.14	-727.8	279.3	781.1	766.7	14.38	54.310	
4,200.0	4,199.9	4,203.1	4,202.1	7.3	7.5	160.40	-727.4	276.8	784.0	769.3	14.72	53.255	
4,300.0	4,299.6	4,311.0	4,310.0	7.5	7.7	160.70	-726.2	274.4	789.3	774.2	15.07	52.379	
4,321.5	4,321.0	4,332.4	4,331.3	7.5	7.7	160.76	-725.8	273.9	790.7	775.5	15.14	52.228	
4,400.0	4,399.1	4,409.8	4,408.8	7.6	7.8	161.04	-724.7	272.0	796.0	780.6	15.41	51.645	
4,500.0	4,498.7	4,506.9	4,505.8	7.8	8.0	161.35	-723.3	270.0	803.1	787.4	15.76	50.962	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 13-5 (EXISTING) - ENCANA WELL - SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 100-MWD — **Offset Well Error:** 0.0 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
4,600.0	4,598.2	4,602.8	4,601.6	8.0	8.2	161.63	-722.1	268.6	810.7	794.6	16.10	50.343	
4,700.0	4,697.7	4,700.0	4,698.9	8.2	8.3	161.91	-721.3	267.2	818.6	802.2	16.45	49.767	
4,800.0	4,797.3	4,797.9	4,796.8	8.4	8.5	162.21	-720.9	265.7	826.9	810.1	16.80	49.225	
4,900.0	4,896.8	4,903.8	4,902.6	8.6	8.7	162.50	-720.0	264.1	834.8	817.7	17.16	48.651	
5,000.0	4,996.3	5,001.0	4,999.9	8.8	8.9	162.74	-718.8	263.0	842.5	825.0	17.50	48.133	
5,100.0	5,095.9	5,101.6	5,100.4	9.0	9.0	162.97	-717.6	262.0	850.3	832.5	17.86	47.622	
5,200.0	5,195.4	5,200.0	5,198.8	9.2	9.2	163.19	-716.4	261.1	858.2	840.0	18.20	47.145	
5,300.0	5,294.9	5,298.5	5,297.3	9.4	9.4	163.40	-715.4	260.3	866.1	847.6	18.55	46.691	
5,400.0	5,394.5	5,395.0	5,393.8	9.6	9.5	163.60	-714.5	259.7	874.4	855.5	18.89	46.279	
5,500.0	5,494.0	5,493.7	5,492.5	9.8	9.7	163.80	-713.9	259.2	882.9	863.6	19.24	45.884	
5,600.0	5,593.5	5,585.6	5,584.4	10.0	9.9	164.00	-713.8	258.5	891.8	872.2	19.58	45.550	
5,700.0	5,693.1	5,682.6	5,681.4	10.3	10.1	164.23	-714.4	257.5	901.4	881.5	19.93	45.239	
5,800.0	5,792.6	5,782.6	5,781.4	10.5	10.2	164.48	-715.1	256.4	911.1	890.8	20.28	44.931	
5,900.0	5,892.1	5,888.1	5,886.8	10.7	10.4	164.71	-715.5	255.5	920.5	899.9	20.64	44.604	
6,000.0	5,991.7	5,994.9	5,993.7	10.9	10.6	164.92	-715.0	254.7	929.1	908.1	21.00	44.244	
6,100.0	6,091.2	6,095.8	6,094.5	11.1	10.8	165.11	-714.0	253.7	937.3	916.0	21.35	43.898	
6,200.0	6,190.7	6,187.1	6,185.8	11.3	10.9	165.27	-713.4	253.3	945.9	924.2	21.69	43.617	
6,300.0	6,290.3	6,294.0	6,292.7	11.5	11.1	165.44	-712.8	252.9	954.6	932.6	22.05	43.297	
6,400.0	6,389.8	6,385.5	6,384.3	11.8	11.3	165.61	-712.4	252.1	963.3	940.9	22.38	43.032	
6,500.0	6,489.3	6,478.6	6,477.3	12.0	11.4	165.77	-712.6	251.6	972.7	950.0	22.72	42.809	
6,600.0	6,588.9	6,585.4	6,584.1	12.2	11.6	165.96	-713.0	251.0	982.3	959.2	23.09	42.550	
6,694.3	6,682.7	6,679.8	6,678.5	12.4	11.8	166.13	-712.8	250.2	990.7	967.3	23.42	42.310	
6,700.0	6,688.4	6,685.3	6,684.1	12.4	11.8	166.34	-712.8	250.2	991.2	967.8	23.45	42.277	
6,750.0	6,738.3	6,732.8	6,731.5	12.5	11.9	-95.00	-712.7	250.0	993.2	969.5	23.65	42.003	
6,800.0	6,788.3	6,779.5	6,778.2	12.6	12.0	-17.22	-712.7	249.8	991.1	967.4	23.73	41.765	
6,850.0	6,837.8	6,828.9	6,827.7	12.6	12.0	-16.60	-712.9	249.7	985.0	961.3	23.71	41.546	
6,900.0	6,886.6	6,880.0	6,878.7	12.6	12.1	-16.78	-713.0	249.5	974.6	951.0	23.58	41.332	
6,950.0	6,934.3	6,929.8	6,928.5	12.6	12.2	-17.33	-713.0	249.3	960.1	936.8	23.35	41.120	
7,000.0	6,980.4	6,978.1	6,976.8	12.6	12.3	-18.19	-712.9	249.1	941.6	918.5	23.03	40.892	
7,050.0	7,024.8	7,020.5	7,019.2	12.6	12.4	-19.34	-712.8	248.9	919.2	896.6	22.62	40.637	
7,100.0	7,066.9	7,057.7	7,056.4	12.6	12.4	-20.83	-712.8	248.9	893.6	871.4	22.16	40.322	
7,150.0	7,106.5	7,092.9	7,091.6	12.5	12.5	-22.74	-712.9	249.1	864.8	843.1	21.69	39.874	
7,200.0	7,143.4	7,128.6	7,127.3	12.6	12.6	-25.26	-713.1	249.5	833.0	811.7	21.26	39.181	
7,250.0	7,177.1	7,162.1	7,160.8	12.6	12.6	-28.52	-713.2	250.2	798.5	777.5	20.95	38.114	
7,300.0	7,207.5	7,192.1	7,190.7	12.7	12.7	-32.67	-713.3	251.0	761.6	740.7	20.85	36.519	
7,350.0	7,234.4	7,219.0	7,217.7	12.8	12.7	-37.96	-713.3	251.9	722.5	701.4	21.09	34.263	
7,400.0	7,257.4	7,242.1	7,240.7	13.0	12.7	-44.54	-713.2	252.8	681.8	660.1	21.75	31.350	
7,450.0	7,276.5	7,260.9	7,259.6	13.2	12.8	-52.45	-713.1	253.7	639.9	617.1	22.84	28.018	
7,500.0	7,291.6	7,275.5	7,274.1	13.5	12.8	-61.43	-713.0	254.5	597.2	573.0	24.20	24.677	
7,550.0	7,302.3	7,285.7	7,284.3	13.8	12.8	-70.86	-712.9	255.0	554.3	528.7	25.55	21.697	
7,600.0	7,308.8	7,291.6	7,290.2	14.2	12.8	-79.86	-712.9	255.3	511.7	485.1	26.61	19.230	
7,649.7	7,311.0	7,293.1	7,291.7	14.6	12.8	-87.61	-712.9	255.4	470.3	443.0	27.31	17.221	
7,700.0	7,311.0	7,292.6	7,291.2	15.1	12.8	-87.50	-712.9	255.4	430.2	402.4	27.77	15.489	
7,800.0	7,311.0	7,291.5	7,290.1	16.1	12.8	-87.27	-712.9	255.3	357.9	329.2	28.79	12.433	
7,900.0	7,311.0	7,290.5	7,289.1	17.3	12.8	-87.06	-712.9	255.3	302.0	272.1	29.93	10.091	
8,000.0	7,311.0	7,289.5	7,288.1	18.5	12.8	-86.84	-712.9	255.2	272.6	241.4	31.16	8.747	
8,034.6	7,311.0	7,289.2	7,287.8	19.0	12.8	-86.77	-712.9	255.2	270.4	238.7	31.61	8.552	CC, ES, SF
8,100.0	7,311.0	7,288.5	7,287.1	19.8	12.8	-86.63	-712.9	255.2	278.1	245.7	32.47	8.567	
8,200.0	7,311.0	7,287.6	7,286.2	21.2	12.8	-86.43	-712.9	255.1	316.9	283.1	33.84	9.366	
8,300.0	7,311.0	7,286.6	7,285.2	22.6	12.8	-86.23	-712.9	255.1	378.8	343.6	35.26	10.744	
8,400.0	7,311.0	7,285.7	7,284.3	24.1	12.8	-86.04	-712.9	255.0	454.5	417.8	36.72	12.376	
8,500.0	7,311.0	7,284.8	7,283.4	25.6	12.8	-85.85	-712.9	255.0	538.2	500.0	38.22	14.081	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 13-5 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 100-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
8,600.0	7,311.0	7,283.9	7,282.5	27.2	12.8	-85.66	-712.9	254.9	626.7	586.9	39.75	15.766	
8,700.0	7,311.0	7,283.1	7,281.7	28.7	12.8	-85.48	-713.0	254.9	718.2	676.9	41.30	17.390	
8,800.0	7,311.0	7,282.2	7,280.8	30.3	12.8	-85.30	-713.0	254.8	811.7	768.8	42.87	18.935	
8,900.0	7,311.0	7,281.4	7,280.0	31.9	12.8	-85.13	-713.0	254.8	906.6	862.1	44.45	20.394	
9,000.0	7,311.0	7,280.6	7,279.2	33.5	12.8	-84.96	-713.0	254.7	1,002.5	956.4	46.06	21.767	
9,100.0	7,311.0	7,279.8	7,278.4	35.2	12.8	-84.79	-713.0	254.7	1,099.1	1,051.4	47.67	23.058	
9,200.0	7,311.0	7,279.0	7,277.7	36.8	12.8	-84.63	-713.0	254.6	1,196.3	1,147.0	49.29	24.270	
9,300.0	7,311.0	7,278.3	7,276.9	38.4	12.8	-84.46	-713.0	254.6	1,293.9	1,243.0	50.92	25.409	
9,400.0	7,311.0	7,277.5	7,276.2	40.1	12.8	-84.31	-713.0	254.6	1,391.8	1,339.3	52.56	26.480	
9,500.0	7,311.0	7,276.8	7,275.4	41.8	12.8	-84.15	-713.0	254.5	1,490.1	1,435.8	54.21	27.488	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 14-5 (EXISTING) - ENCANA WELL - NO SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 7950-MWD — **Offset Well Error:** 0.0 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,200.0	7,311.0	7,315.0	7,315.0	21.2	12.8	-90.00	-2,361.3	123.8	1,491.9	1,458.0	33.94	43.952	
8,300.0	7,311.0	7,315.0	7,315.0	22.6	12.8	-90.00	-2,361.3	123.8	1,392.5	1,357.1	35.38	39.361	
8,400.0	7,311.0	7,315.0	7,315.0	24.1	12.8	-90.00	-2,361.3	123.8	1,293.1	1,256.3	36.85	35.089	
8,500.0	7,311.0	7,315.0	7,315.0	25.6	12.8	-90.00	-2,361.3	123.8	1,193.9	1,155.5	38.36	31.121	
8,600.0	7,311.0	7,315.0	7,315.0	27.2	12.8	-90.00	-2,361.3	123.8	1,094.8	1,054.9	39.90	27.436	
8,700.0	7,311.0	7,315.0	7,315.0	28.7	12.8	-90.00	-2,361.3	123.8	995.9	954.4	41.47	24.016	
8,800.0	7,311.0	7,315.0	7,315.0	30.3	12.8	-90.00	-2,361.3	123.8	897.2	854.1	43.05	20.839	
8,900.0	7,311.0	7,315.0	7,315.0	31.9	12.8	-90.00	-2,361.3	123.8	798.8	754.2	44.66	17.889	
9,000.0	7,311.0	7,315.0	7,315.0	33.5	12.8	-90.00	-2,361.3	123.8	700.9	654.7	46.27	15.148	
9,100.0	7,311.0	7,315.0	7,315.0	35.2	12.8	-90.00	-2,361.3	123.8	603.8	555.8	47.90	12.603	
9,200.0	7,311.0	7,315.0	7,315.0	36.8	12.8	-90.00	-2,361.3	123.8	507.6	458.1	49.55	10.246	
9,300.0	7,311.0	7,315.0	7,315.0	38.4	12.8	-90.00	-2,361.3	123.8	413.4	362.2	51.20	8.074	
9,400.0	7,311.0	7,315.0	7,315.0	40.1	12.8	-90.00	-2,361.3	123.8	322.6	269.8	52.86	6.103	
9,500.0	7,311.0	7,315.0	7,315.0	41.8	12.8	-90.00	-2,361.3	123.8	239.3	184.8	54.53	4.389	
9,600.0	7,311.0	7,315.0	7,315.0	43.5	12.8	-90.00	-2,361.3	123.8	174.5	118.3	56.20	3.105	
9,684.1	7,311.0	7,315.0	7,315.0	44.9	12.8	-90.00	-2,361.3	123.8	152.9	95.3	57.62	2.654	CC, ES, SF
9,700.0	7,311.0	7,315.0	7,315.0	45.1	12.8	-90.00	-2,361.3	123.8	153.8	95.9	57.89	2.656	
9,800.0	7,311.0	7,315.0	7,315.0	46.8	12.8	-90.00	-2,361.3	123.8	191.9	132.3	59.57	3.221	
9,900.0	7,311.0	7,315.0	7,315.0	48.5	12.8	-90.00	-2,361.3	123.8	264.6	203.3	61.26	4.319	
10,000.0	7,311.0	7,315.0	7,315.0	50.2	12.8	-90.00	-2,361.3	123.8	351.0	288.0	62.96	5.575	
10,100.0	7,311.0	7,315.0	7,315.0	51.9	12.8	-90.00	-2,361.3	123.8	443.2	378.5	64.66	6.854	
10,200.0	7,311.0	7,315.0	7,315.0	53.6	12.8	-90.00	-2,361.3	123.8	538.1	471.8	66.36	8.109	
10,300.0	7,311.0	7,315.0	7,315.0	55.3	12.8	-90.00	-2,361.3	123.8	634.6	566.6	68.07	9.324	
10,400.0	7,311.0	7,315.0	7,315.0	57.0	12.8	-90.00	-2,361.3	123.8	732.1	662.3	69.78	10.492	
10,500.0	7,311.0	7,315.0	7,315.0	58.7	12.8	-90.00	-2,361.3	123.8	830.1	758.7	71.49	11.612	
10,600.0	7,311.0	7,315.0	7,315.0	60.5	12.8	-90.00	-2,361.3	123.8	928.6	855.4	73.20	12.685	
10,700.0	7,311.0	7,315.0	7,315.0	62.2	12.8	-90.00	-2,361.3	123.8	1,027.4	952.5	74.92	13.713	
10,800.0	7,311.0	7,315.0	7,315.0	63.9	12.8	-90.00	-2,361.3	123.8	1,126.4	1,049.7	76.64	14.697	
10,900.0	7,311.0	7,315.0	7,315.0	65.6	12.8	-90.00	-2,361.3	123.8	1,225.5	1,147.2	78.36	15.640	
11,000.0	7,311.0	7,315.0	7,315.0	67.3	12.8	-90.00	-2,361.3	123.8	1,324.8	1,244.7	80.08	16.543	
11,069.7	7,311.0	7,315.0	7,315.0	68.5	12.8	-90.00	-2,361.3	123.8	1,394.1	1,312.8	81.28	17.151	
11,100.0	7,311.0	7,315.0	7,315.0	69.1	12.8	-90.00	-2,361.3	123.8	1,424.2	1,342.4	81.80	17.410	
11,196.4	7,311.0	7,315.0	7,315.0	70.7	12.8	-90.00	-2,361.3	123.8	1,519.9	1,436.5	83.45	18.214	
11,200.0	7,311.0	7,315.0	7,315.0	70.8	12.8	-90.00	-2,361.3	123.8	1,523.5	1,440.0	83.51	18.243	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 2-4-5 (EXISTING) - ENCANA WELL - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	148.74	-663.0	402.4	775.6				
100.0	100.0	99.0	99.0	0.1	0.1	148.74	-663.0	402.4	775.6	775.3	0.27	2,882.515	
200.0	200.0	199.0	199.0	0.3	0.3	148.74	-663.0	402.4	775.6	774.9	0.62	1,255.230	
300.0	300.0	299.0	299.0	0.5	0.5	148.74	-663.0	402.4	775.6	774.6	0.97	802.087	
400.0	400.0	399.0	399.0	0.6	0.7	148.74	-663.0	402.4	775.6	774.2	1.32	589.334	
500.0	500.0	499.0	499.0	0.8	0.8	148.74	-663.0	402.4	775.6	773.9	1.67	465.785	
600.0	600.0	599.0	599.0	1.0	1.0	148.74	-663.0	402.4	775.6	773.5	2.01	385.061	
700.0	700.0	699.0	699.0	1.2	1.2	148.74	-663.0	402.4	775.6	773.2	2.36	328.184	
800.0	800.0	799.0	799.0	1.3	1.4	148.74	-663.0	402.4	775.6	772.8	2.71	285.947	
900.0	900.0	899.0	899.0	1.5	1.5	148.74	-663.0	402.4	775.6	772.5	3.06	253.342	
1,000.0	1,000.0	999.0	999.0	1.7	1.7	148.74	-663.0	402.4	775.6	772.2	3.41	227.411	
1,100.0	1,100.0	1,099.0	1,099.0	1.9	1.9	148.74	-663.0	402.4	775.6	771.8	3.76	206.296	
1,200.0	1,200.0	1,199.0	1,199.0	2.0	2.1	148.74	-663.0	402.4	775.6	771.5	4.11	188.769	
1,201.0	1,201.0	1,200.0	1,200.0	2.0	2.1	148.74	-663.0	402.4	775.6	771.4	4.11	188.614	CC
1,300.0	1,300.0	1,298.9	1,298.9	2.2	2.2	148.62	-662.1	403.9	775.6	771.1	4.46	173.960	
1,400.0	1,400.0	1,398.6	1,398.5	2.4	2.4	148.23	-659.4	408.3	775.6	770.8	4.81	161.153	
1,500.0	1,500.0	1,497.9	1,497.3	2.6	2.6	147.60	-655.0	415.7	775.7	770.6	5.18	149.785	
1,600.0	1,600.0	1,596.4	1,595.1	2.7	2.8	146.72	-648.8	425.9	776.1	770.5	5.57	139.455	ES
1,700.0	1,700.0	1,694.7	1,692.4	2.9	3.1	145.63	-641.2	438.5	776.8	770.8	5.97	130.078	
1,800.0	1,800.0	1,793.6	1,790.0	3.1	3.3	144.52	-633.3	451.4	777.8	771.4	6.39	121.657	
1,900.0	1,900.0	1,892.4	1,887.7	3.3	3.6	143.41	-625.5	464.4	779.1	772.3	6.83	114.146	
2,000.0	2,000.0	1,991.2	1,985.3	3.4	3.8	142.30	-617.6	477.3	780.7	773.4	7.27	107.450	
2,100.0	2,100.0	2,090.0	2,083.0	3.6	4.1	141.20	-609.8	490.3	782.6	774.9	7.71	101.475	
2,200.0	2,200.0	2,188.8	2,180.6	3.8	4.4	140.10	-601.9	503.3	784.8	776.6	8.16	96.137	
2,300.0	2,300.0	2,287.6	2,278.2	4.0	4.7	139.01	-594.1	516.2	787.3	778.7	8.62	91.356	
2,400.0	2,400.0	2,386.5	2,375.9	4.1	5.0	137.93	-586.2	529.2	790.1	781.0	9.07	87.064	
2,500.0	2,500.0	2,485.3	2,473.5	4.3	5.3	136.85	-578.3	542.2	793.1	783.6	9.53	83.200	
2,600.0	2,600.0	2,584.1	2,571.2	4.5	5.5	135.78	-570.5	555.1	796.5	786.5	9.99	79.714	
2,700.0	2,700.0	2,682.9	2,668.8	4.7	5.8	134.72	-562.6	568.1	800.1	789.7	10.45	76.560	
2,800.0	2,800.0	2,781.7	2,766.5	4.8	6.1	133.68	-554.8	581.0	804.0	793.1	10.91	73.698	
2,900.0	2,900.0	2,880.5	2,864.1	5.0	6.4	132.64	-546.9	594.0	808.2	796.8	11.37	71.097	
3,000.0	3,000.0	2,979.4	2,961.8	5.2	6.7	131.61	-539.1	607.0	812.7	800.8	11.82	68.727	
3,100.0	3,100.0	3,078.2	3,059.4	5.4	7.1	130.59	-531.2	619.9	817.4	805.1	12.28	66.563	
3,200.0	3,200.0	3,177.0	3,157.1	5.5	7.4	129.59	-523.4	632.9	822.3	809.6	12.73	64.582	
3,300.0	3,300.0	3,275.8	3,254.7	5.7	7.7	128.60	-515.5	645.9	827.6	814.4	13.18	62.767	
3,400.0	3,400.0	3,374.6	3,352.4	5.9	8.0	127.62	-507.7	658.8	833.0	819.4	13.63	61.100	
3,500.0	3,500.0	3,473.4	3,450.0	6.1	8.3	126.65	-499.8	671.8	838.8	824.7	14.08	59.567	
3,600.0	3,600.0	3,572.3	3,547.7	6.2	8.6	125.70	-492.0	684.7	844.7	830.2	14.53	58.155	
3,700.0	3,700.0	3,671.1	3,645.3	6.4	8.9	124.76	-484.1	697.7	850.9	835.9	14.97	56.852	
3,800.0	3,800.0	3,769.9	3,743.0	6.6	9.2	123.83	-476.3	710.7	857.3	841.9	15.41	55.649	
3,900.0	3,900.0	3,868.7	3,840.6	6.8	9.5	122.92	-468.4	723.6	864.0	848.1	15.84	54.536	
4,000.0	4,000.0	3,967.5	3,938.3	6.9	9.8	122.02	-460.6	736.6	870.9	854.6	16.28	53.506	
4,100.0	4,100.0	4,066.4	4,036.0	7.1	10.1	122.19	-452.7	749.6	878.7	862.1	16.66	52.753	
4,200.0	4,199.9	4,165.5	4,133.9	7.3	10.5	121.42	-444.9	762.6	888.4	871.3	17.08	52.013	
4,300.0	4,299.6	4,264.6	4,231.8	7.5	10.8	120.81	-437.0	775.6	899.6	882.1	17.50	51.397	
4,321.5	4,321.0	4,286.0	4,252.9	7.5	10.8	120.69	-435.3	778.4	902.2	884.6	17.59	51.279	
4,400.0	4,399.1	4,363.7	4,329.8	7.6	11.1	120.44	-429.1	788.6	912.0	894.0	17.95	50.810	
4,500.0	4,498.7	4,462.8	4,427.7	7.8	11.4	120.12	-421.2	801.6	924.4	906.0	18.40	50.235	
4,600.0	4,598.2	4,561.9	4,525.6	8.0	11.7	119.82	-413.4	814.6	936.8	918.0	18.86	49.684	
4,700.0	4,697.7	4,661.0	4,623.5	8.2	12.0	119.52	-405.5	827.6	949.3	930.0	19.31	49.156	
4,800.0	4,797.3	4,760.1	4,721.5	8.4	12.3	119.23	-397.6	840.6	961.8	942.0	19.77	48.650	
4,900.0	4,896.8	4,859.2	4,819.4	8.6	12.6	118.94	-389.7	853.6	974.3	954.1	20.23	48.165	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 2-4-5 (EXISTING) - ENCANA WELL - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,996.3	4,958.3	4,917.3	8.8	13.0	118.66	-381.9	866.6	986.9	966.2	20.69	47.699	
5,100.0	5,095.9	5,057.4	5,015.2	9.0	13.3	118.39	-374.0	879.5	999.5	978.3	21.15	47.252	
5,200.0	5,195.4	5,156.5	5,113.2	9.2	13.6	118.13	-366.1	892.5	1,012.1	990.4	21.61	46.823	
5,300.0	5,294.9	5,255.6	5,211.1	9.4	13.9	117.88	-358.2	905.5	1,024.7	1,002.6	22.08	46.409	
5,400.0	5,394.5	5,354.7	5,309.0	9.6	14.2	117.62	-350.4	918.5	1,037.3	1,014.7	22.54	46.012	
5,500.0	5,494.0	5,453.8	5,407.0	9.8	14.5	117.38	-342.5	931.5	1,049.9	1,026.9	23.01	45.630	
5,600.0	5,593.5	5,552.9	5,504.9	10.0	14.9	117.14	-334.6	944.5	1,062.6	1,039.1	23.48	45.261	
5,700.0	5,693.1	5,652.0	5,602.8	10.3	15.2	116.91	-326.7	957.5	1,075.3	1,051.4	23.95	44.907	
5,800.0	5,792.6	5,751.1	5,700.7	10.5	15.5	116.68	-318.9	970.5	1,088.0	1,063.6	24.41	44.565	
5,900.0	5,892.1	5,850.2	5,798.7	10.7	15.8	116.46	-311.0	983.5	1,100.7	1,075.8	24.88	44.235	
6,000.0	5,991.7	5,949.3	5,896.6	10.9	16.1	116.24	-303.1	996.5	1,113.5	1,088.1	25.35	43.917	
6,100.0	6,091.2	6,057.9	6,004.0	11.1	16.4	116.02	-294.7	1,010.5	1,126.1	1,100.2	25.84	43.583	
6,200.0	6,190.7	6,185.2	6,130.4	11.3	16.8	115.96	-287.0	1,023.2	1,136.8	1,110.4	26.33	43.174	
6,300.0	6,290.3	6,313.0	6,257.9	11.5	17.0	116.13	-282.2	1,031.0	1,145.0	1,118.2	26.78	42.751	
6,400.0	6,389.8	6,440.8	6,385.6	11.8	17.2	116.54	-280.4	1,034.0	1,150.8	1,123.6	27.20	42.305	
6,500.0	6,489.3	6,543.5	6,488.3	12.0	17.3	116.98	-280.4	1,034.0	1,155.2	1,127.6	27.58	41.890	
6,600.0	6,588.9	6,643.1	6,587.9	12.2	17.4	117.40	-280.4	1,034.0	1,159.6	1,131.7	27.95	41.495	
6,694.3	6,682.7	6,737.0	6,681.8	12.4	17.5	117.80	-280.4	1,034.0	1,163.9	1,135.6	28.29	41.135	
6,700.0	6,688.4	6,742.6	6,687.4	12.4	17.5	118.03	-280.4	1,034.0	1,164.1	1,135.8	28.32	41.102	
6,750.0	6,738.3	6,792.5	6,737.3	12.5	17.6	-143.21	-280.4	1,034.0	1,165.2	1,136.7	28.51	40.864	
6,800.0	6,788.3	6,842.5	6,787.3	12.6	17.6	-65.51	-280.4	1,034.0	1,164.3	1,135.7	28.61	40.691	
6,850.0	6,837.8	6,892.0	6,836.8	12.6	17.7	-65.18	-280.4	1,034.0	1,161.5	1,132.9	28.63	40.576	
6,900.0	6,886.6	6,940.8	6,885.6	12.6	17.7	-65.78	-280.4	1,034.0	1,156.9	1,128.4	28.56	40.508	
6,950.0	6,934.3	6,988.5	6,933.3	12.6	17.8	-66.87	-280.4	1,034.0	1,150.7	1,122.2	28.43	40.470	
7,000.0	6,980.4	7,034.7	6,979.5	12.6	17.9	-68.34	-280.4	1,034.0	1,142.8	1,114.6	28.26	40.442	
7,050.0	7,024.8	7,079.0	7,023.8	12.6	17.9	-70.13	-280.4	1,034.0	1,133.8	1,105.7	28.06	40.400	
7,100.0	7,066.9	7,121.1	7,065.9	12.6	18.0	-72.17	-280.4	1,034.0	1,123.7	1,095.8	27.87	40.323	
7,150.0	7,106.5	7,160.8	7,105.6	12.5	18.0	-74.41	-280.4	1,034.0	1,112.9	1,085.2	27.69	40.189	
7,200.0	7,143.4	7,197.6	7,142.4	12.6	18.1	-76.77	-280.4	1,034.0	1,101.8	1,074.2	27.55	39.985	
7,250.0	7,177.1	7,231.4	7,176.1	12.6	18.1	-79.17	-280.4	1,034.0	1,090.7	1,063.2	27.47	39.705	
7,300.0	7,207.5	7,261.8	7,206.6	12.7	18.1	-81.51	-280.4	1,034.0	1,080.0	1,052.6	27.45	39.352	
7,350.0	7,234.4	7,288.6	7,233.4	12.8	18.2	-83.72	-280.4	1,034.0	1,070.2	1,042.7	27.49	38.934	
7,400.0	7,257.4	7,311.7	7,256.4	13.0	18.2	-85.70	-280.4	1,034.0	1,061.5	1,033.9	27.60	38.465	
7,450.0	7,276.5	7,330.8	7,275.6	13.2	18.2	-87.37	-280.4	1,034.0	1,054.4	1,026.6	27.78	37.961	
7,500.0	7,291.6	7,345.8	7,290.6	13.5	18.2	-88.68	-280.4	1,034.0	1,049.1	1,021.1	28.02	37.436	
7,550.0	7,302.3	7,356.6	7,301.4	13.8	18.3	-89.58	-280.4	1,034.0	1,045.9	1,017.6	28.34	36.907	
7,595.0	7,308.4	7,362.6	7,307.4	14.2	18.3	-90.00	-280.4	1,034.0	1,044.9	1,016.3	28.68	36.440	
7,600.0	7,308.8	7,363.1	7,307.9	14.2	18.3	-90.02	-280.4	1,034.0	1,045.0	1,016.2	28.71	36.392	
7,649.7	7,311.0	7,365.2	7,310.0	14.6	18.3	-90.00	-280.4	1,034.0	1,046.4	1,017.2	29.14	35.913	
7,700.0	7,311.0	7,365.2	7,310.0	15.1	18.3	-90.00	-280.4	1,034.0	1,050.2	1,020.6	29.60	35.479	
7,800.0	7,311.0	7,365.2	7,310.0	16.1	18.3	-90.00	-280.4	1,034.0	1,064.8	1,034.2	30.63	34.768	
7,900.0	7,311.0	7,365.2	7,310.0	17.3	18.3	-90.00	-280.4	1,034.0	1,088.5	1,056.7	31.77	34.260	
8,000.0	7,311.0	7,365.2	7,310.0	18.5	18.3	-90.00	-280.4	1,034.0	1,120.6	1,087.6	33.01	33.946	
8,100.0	7,311.0	7,365.2	7,310.0	19.8	18.3	-90.00	-280.4	1,034.0	1,160.4	1,126.1	34.33	33.804	SF
8,200.0	7,311.0	7,365.2	7,310.0	21.2	18.3	-90.00	-280.4	1,034.0	1,207.3	1,171.6	35.71	33.809	
8,300.0	7,311.0	7,365.2	7,310.0	22.6	18.3	-90.00	-280.4	1,034.0	1,260.3	1,223.2	37.14	33.933	
8,400.0	7,311.0	7,365.2	7,310.0	24.1	18.3	-90.00	-280.4	1,034.0	1,318.9	1,280.2	38.62	34.152	
8,500.0	7,311.0	7,365.2	7,310.0	25.6	18.3	-90.00	-280.4	1,034.0	1,382.1	1,342.0	40.13	34.444	
8,600.0	7,311.0	7,365.2	7,310.0	27.2	18.3	-90.00	-280.4	1,034.0	1,449.6	1,407.9	41.67	34.789	
8,700.0	7,311.0	7,365.2	7,310.0	28.7	18.3	-90.00	-280.4	1,034.0	1,520.6	1,477.4	43.23	35.173	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 718-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	148.74	-663.0	402.4	775.6				
100.0	100.0	100.8	100.8	0.1	0.2	148.74	-662.9	402.4	775.4	775.1	0.29	2,631.520	
200.0	200.0	202.7	202.7	0.3	0.4	148.73	-662.5	402.3	775.1	774.4	0.64	1,204.613	
300.0	300.0	304.5	304.5	0.5	0.5	148.72	-661.9	402.1	774.5	773.5	0.99	780.592	
400.0	400.0	406.4	406.4	0.6	0.7	148.70	-661.0	401.9	773.7	772.3	1.34	576.957	
500.0	500.0	508.2	508.2	0.8	0.9	148.68	-660.0	401.6	772.6	770.9	1.69	457.242	
600.0	600.0	610.0	610.0	1.0	1.1	148.65	-658.6	401.2	771.3	769.2	2.04	378.375	
700.0	700.0	711.9	711.8	1.2	1.2	148.62	-657.0	400.8	769.7	767.4	2.39	322.453	
800.0	800.0	806.0	805.9	1.3	1.4	148.53	-655.5	401.2	768.5	765.8	2.73	281.810	
900.0	900.0	904.2	904.1	1.5	1.6	148.32	-653.3	403.2	767.7	764.6	3.08	249.444	
1,000.0	1,000.0	1,000.3	1,000.1	1.7	1.8	147.93	-650.2	407.4	767.3	763.8	3.43	223.484	
1,022.9	1,022.9	1,022.2	1,021.9	1.7	1.8	147.82	-649.4	408.7	767.3	763.7	3.52	218.259	CC
1,100.0	1,100.0	1,093.7	1,093.2	1.9	1.9	147.40	-646.6	413.6	767.5	763.7	3.80	202.227	ES
1,200.0	1,200.0	1,193.3	1,192.2	2.0	2.2	146.65	-642.0	422.5	768.5	764.4	4.19	183.518	
1,300.0	1,300.0	1,290.1	1,288.3	2.2	2.4	145.77	-636.1	432.9	769.5	764.9	4.60	167.450	
1,400.0	1,400.0	1,387.7	1,385.0	2.4	2.6	144.75	-629.7	445.1	771.2	766.2	5.03	153.463	
1,500.0	1,500.0	1,487.3	1,483.3	2.6	2.9	143.62	-622.3	458.5	773.1	767.7	5.48	141.046	
1,600.0	1,600.0	1,588.8	1,583.5	2.7	3.2	142.37	-613.8	473.2	775.2	769.2	5.96	130.037	
1,700.0	1,700.0	1,691.8	1,685.0	2.9	3.5	141.09	-604.6	488.0	777.1	770.7	6.45	120.491	
1,800.0	1,800.0	1,787.7	1,779.6	3.1	3.8	139.96	-596.4	501.1	779.2	772.3	6.91	112.769	
1,900.0	1,900.0	1,881.9	1,872.7	3.3	4.1	138.91	-589.1	513.8	782.1	774.8	7.36	106.230	
2,000.0	2,000.0	1,973.8	1,963.5	3.4	4.4	137.91	-582.7	526.4	786.0	778.2	7.81	100.579	
2,100.0	2,100.0	2,068.9	2,057.3	3.6	4.7	136.82	-576.1	540.5	791.1	782.8	8.28	95.553	
2,200.0	2,200.0	2,171.9	2,158.9	3.8	5.0	135.71	-569.2	555.4	796.3	787.5	8.76	90.933	
2,300.0	2,300.0	2,280.0	2,265.8	4.0	5.3	134.59	-561.7	569.9	800.9	791.6	9.25	86.611	
2,400.0	2,400.0	2,374.4	2,359.0	4.1	5.6	133.58	-554.7	582.9	805.6	795.9	9.70	83.010	
2,500.0	2,500.0	2,480.9	2,464.1	4.3	6.0	132.41	-546.0	597.7	810.3	800.1	10.20	79.427	
2,600.0	2,600.0	2,584.8	2,566.7	4.5	6.3	131.27	-536.8	611.6	814.4	803.7	10.69	76.188	
2,700.0	2,700.0	2,680.1	2,660.9	4.7	6.6	130.26	-528.5	624.0	818.7	807.5	11.14	73.501	
2,800.0	2,800.0	2,778.3	2,757.9	4.8	6.9	129.30	-521.0	636.5	823.5	812.0	11.59	71.086	
2,900.0	2,900.0	2,871.0	2,849.7	5.0	7.2	128.42	-514.2	648.2	828.9	816.8	12.03	68.918	
3,000.0	3,000.0	2,967.3	2,944.7	5.2	7.5	127.41	-506.4	662.1	835.3	822.8	12.48	66.909	
3,100.0	3,100.0	3,070.0	3,046.0	5.4	7.9	126.37	-498.1	676.4	841.6	828.7	12.95	65.003	
3,200.0	3,200.0	3,166.0	3,140.8	5.5	8.2	125.43	-490.5	689.5	848.1	834.7	13.39	63.336	
3,300.0	3,300.0	3,264.9	3,238.4	5.7	8.5	124.46	-482.7	703.3	855.1	841.3	13.84	61.790	
3,400.0	3,400.0	3,369.4	3,341.6	5.9	8.8	123.46	-474.1	717.5	861.9	847.6	14.30	60.271	
3,500.0	3,500.0	3,465.8	3,436.8	6.1	9.1	122.55	-466.3	730.5	868.9	854.2	14.73	58.976	
3,600.0	3,600.0	3,569.5	3,539.3	6.2	9.5	121.62	-458.0	744.0	875.8	860.6	15.18	57.700	
3,700.0	3,700.0	3,664.9	3,633.5	6.4	9.8	120.76	-450.4	756.6	883.0	867.4	15.60	56.582	
3,800.0	3,800.0	3,763.7	3,731.0	6.6	10.1	119.84	-441.8	770.1	890.4	874.4	16.05	55.494	
3,900.0	3,900.0	3,857.6	3,823.6	6.8	10.4	118.96	-433.5	783.3	898.4	882.0	16.47	54.550	
4,000.0	4,000.0	3,956.6	3,921.2	6.9	10.8	118.04	-424.7	797.5	906.9	890.0	16.90	53.651	
4,100.0	4,100.0	4,049.4	4,012.7	7.1	11.1	118.24	-417.1	810.9	916.6	899.4	17.24	53.172	
4,200.0	4,199.9	4,162.2	4,124.2	7.3	11.4	117.49	-409.1	825.9	927.5	909.8	17.66	52.511	
4,300.0	4,299.6	4,266.8	4,227.8	7.5	11.7	117.01	-402.1	838.5	938.8	920.7	18.08	51.938	
4,321.5	4,321.0	4,290.8	4,251.6	7.5	11.8	116.93	-400.5	841.3	941.3	923.1	18.17	51.809	
4,400.0	4,399.1	4,368.6	4,328.7	7.6	12.0	116.80	-395.0	850.2	950.4	931.9	18.51	51.345	
4,500.0	4,498.7	4,472.0	4,431.2	7.8	12.3	116.64	-387.9	862.0	962.0	943.0	18.95	50.763	
4,600.0	4,598.2	4,576.3	4,534.7	8.0	12.6	116.53	-381.2	872.9	973.0	953.6	19.39	50.179	
4,700.0	4,697.7	4,672.2	4,629.8	8.2	12.9	116.43	-374.9	882.9	983.9	964.1	19.82	49.651	
4,800.0	4,797.3	4,774.0	4,730.9	8.4	13.2	116.32	-368.2	893.8	995.0	974.8	20.25	49.126	
4,900.0	4,896.8	4,874.0	4,830.1	8.6	13.4	116.23	-361.8	904.0	1,005.8	985.1	20.69	48.608	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - MCCOY 2-4-5 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 718-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,996.3	4,971.6	4,927.0	8.8	13.7	116.15	-355.6	914.2	1,016.8	995.7	21.12	48.133	
5,100.0	5,095.9	5,069.1	5,023.7	9.0	14.0	116.05	-349.2	924.5	1,027.8	1,006.3	21.56	47.673	
5,200.0	5,195.4	5,164.2	5,118.1	9.2	14.2	115.95	-343.1	934.9	1,039.3	1,017.3	21.99	47.265	
5,300.0	5,294.9	5,272.9	5,226.0	9.4	14.5	115.87	-336.4	946.4	1,050.5	1,028.0	22.45	46.789	
5,400.0	5,394.5	5,369.1	5,321.4	9.6	14.8	115.80	-330.4	956.3	1,061.5	1,038.6	22.88	46.385	
5,500.0	5,494.0	5,469.3	5,420.9	9.8	15.1	115.74	-324.3	966.6	1,072.4	1,049.1	23.33	45.973	
5,600.0	5,593.5	5,574.9	5,525.8	10.0	15.4	115.68	-317.9	977.2	1,083.2	1,059.4	23.78	45.555	
5,700.0	5,693.1	5,671.2	5,621.5	10.3	15.6	115.67	-312.6	986.1	1,093.5	1,069.3	24.20	45.178	
5,800.0	5,792.6	5,757.9	5,707.7	10.5	15.8	115.67	-308.4	994.8	1,104.7	1,080.1	24.61	44.893	
5,900.0	5,892.1	5,870.9	5,820.0	10.7	16.1	115.71	-303.5	1,006.0	1,116.2	1,091.1	25.06	44.540	
6,000.0	5,991.7	5,998.9	5,947.6	10.9	16.4	115.84	-298.4	1,015.6	1,125.5	1,100.0	25.54	44.071	
6,100.0	6,091.2	6,101.3	6,049.6	11.1	16.6	115.94	-293.7	1,021.8	1,133.2	1,107.3	25.96	43.646	
6,200.0	6,190.7	6,211.8	6,159.9	11.3	16.8	116.12	-289.7	1,027.7	1,140.8	1,114.4	26.39	43.226	
6,300.0	6,290.3	6,325.2	6,273.2	11.5	17.0	116.39	-286.8	1,031.6	1,147.1	1,120.3	26.81	42.788	
6,400.0	6,389.8	6,433.4	6,381.3	11.8	17.1	116.72	-284.8	1,033.6	1,152.4	1,125.2	27.21	42.356	
6,500.0	6,489.3	6,537.6	6,485.6	12.0	17.3	117.10	-283.7	1,034.7	1,157.2	1,129.6	27.59	41.941	
6,600.0	6,588.9	6,640.8	6,588.8	12.2	17.4	117.49	-282.9	1,035.1	1,161.7	1,133.7	27.97	41.535	
6,694.3	6,682.7	6,737.1	6,685.1	12.4	17.5	117.88	-282.5	1,035.1	1,165.8	1,137.5	28.32	41.162	
6,700.0	6,688.4	6,742.9	6,690.9	12.4	17.5	118.11	-282.5	1,035.1	1,166.0	1,137.7	28.35	41.128	
6,750.0	6,738.3	6,794.6	6,742.5	12.5	17.6	-143.15	-282.4	1,035.0	1,166.9	1,138.4	28.54	40.883	
6,800.0	6,788.3	6,846.4	6,794.4	12.6	17.6	-65.47	-282.3	1,034.7	1,165.8	1,137.1	28.64	40.702	
6,850.0	6,837.8	6,896.5	6,844.5	12.6	17.7	-65.16	-282.3	1,034.3	1,162.7	1,134.0	28.65	40.578	
6,900.0	6,886.6	6,945.5	6,893.5	12.6	17.8	-65.79	-282.2	1,034.0	1,157.8	1,129.2	28.59	40.501	
6,950.0	6,934.3	6,993.0	6,941.0	12.6	17.8	-66.91	-282.2	1,033.7	1,151.1	1,122.7	28.46	40.454	
7,000.0	6,980.4	7,039.0	6,987.0	12.6	17.9	-68.41	-282.1	1,033.4	1,143.0	1,114.7	28.28	40.416	
7,050.0	7,024.8	7,081.2	7,029.2	12.6	17.9	-70.17	-282.1	1,033.1	1,133.6	1,105.5	28.08	40.364	
7,100.0	7,066.9	7,121.0	7,069.0	12.6	18.0	-72.17	-282.1	1,033.0	1,123.3	1,095.4	27.89	40.280	
7,150.0	7,106.5	7,158.5	7,106.4	12.5	18.0	-74.36	-282.1	1,032.9	1,112.4	1,084.7	27.71	40.142	
7,200.0	7,143.4	7,194.8	7,142.8	12.6	18.0	-76.71	-282.1	1,032.9	1,101.2	1,073.6	27.57	39.936	
7,250.0	7,177.1	7,229.2	7,177.2	12.6	18.1	-79.14	-282.1	1,032.9	1,090.1	1,062.6	27.49	39.653	
7,300.0	7,207.5	7,260.2	7,208.2	12.7	18.1	-81.52	-282.1	1,032.8	1,079.3	1,051.8	27.47	39.296	
7,350.0	7,234.4	7,288.3	7,236.3	12.8	18.2	-83.80	-282.1	1,032.8	1,069.3	1,041.8	27.51	38.873	
7,400.0	7,257.4	7,312.7	7,260.7	13.0	18.2	-85.86	-282.1	1,032.7	1,060.5	1,032.9	27.62	38.399	
7,450.0	7,276.5	7,332.9	7,280.8	13.2	18.2	-87.61	-282.0	1,032.6	1,053.2	1,025.4	27.80	37.890	
7,500.0	7,291.6	7,348.6	7,296.6	13.5	18.2	-88.98	-282.0	1,032.5	1,047.7	1,019.7	28.04	37.360	
7,550.0	7,302.3	7,359.8	7,307.8	13.8	18.2	-89.91	-282.0	1,032.4	1,044.4	1,016.0	28.36	36.827	
7,597.2	7,308.6	7,366.1	7,314.1	14.2	18.2	-90.36	-282.0	1,032.4	1,043.4	1,014.6	28.72	36.334	
7,600.0	7,308.8	7,366.4	7,314.3	14.2	18.2	-90.37	-281.9	1,032.4	1,043.4	1,014.6	28.74	36.307	
7,649.7	7,311.0	7,368.4	7,316.3	14.6	18.2	-90.35	-281.9	1,032.4	1,044.7	1,015.5	29.16	35.823	
7,700.0	7,311.0	7,368.2	7,316.2	15.1	18.2	-90.34	-281.9	1,032.4	1,048.4	1,018.8	29.63	35.389	
7,800.0	7,311.0	7,367.9	7,315.9	16.1	18.2	-90.32	-281.9	1,032.4	1,062.9	1,032.3	30.65	34.678	
7,900.0	7,311.0	7,367.6	7,315.6	17.3	18.2	-90.30	-281.9	1,032.4	1,086.5	1,054.7	31.80	34.171	
8,000.0	7,311.0	7,367.3	7,315.2	18.5	18.2	-90.29	-281.9	1,032.4	1,118.5	1,085.5	33.03	33.858	
8,100.0	7,311.0	7,367.0	7,314.9	19.8	18.2	-90.27	-281.9	1,032.4	1,158.3	1,124.0	34.35	33.718	SF
8,200.0	7,311.0	7,366.6	7,314.6	21.2	18.2	-90.25	-281.9	1,032.4	1,205.1	1,169.4	35.73	33.725	
8,300.0	7,311.0	7,366.3	7,314.3	22.6	18.2	-90.23	-281.9	1,032.4	1,258.1	1,221.0	37.17	33.852	
8,400.0	7,311.0	7,366.0	7,314.0	24.1	18.2	-90.22	-282.0	1,032.4	1,316.6	1,278.0	38.64	34.074	
8,500.0	7,311.0	7,365.7	7,313.6	25.6	18.2	-90.20	-282.0	1,032.4	1,379.9	1,339.8	40.15	34.368	
8,600.0	7,311.0	7,365.3	7,313.3	27.2	18.2	-90.18	-282.0	1,032.4	1,447.3	1,405.6	41.69	34.716	
8,700.0	7,311.0	7,365.0	7,313.0	28.7	18.2	-90.16	-282.0	1,032.4	1,518.4	1,475.1	43.25	35.103	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - PROMINENCE 4-8 (EXISTING) - KMG WELL - GYRO — **Offset Site Error:** 0.0 ft

Survey Program: 100-Gyro — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,600.0	7,311.0	7,300.0	7,297.5	43.5	6.5	-63.48	-3,724.6	36.1	1,450.6	1,404.7	45.90	31.607	
9,700.0	7,311.0	7,300.0	7,297.5	45.1	6.5	-63.48	-3,724.6	36.1	1,350.8	1,303.4	47.40	28.498	
9,800.0	7,311.0	7,300.0	7,297.5	46.8	6.5	-63.48	-3,724.6	36.1	1,251.0	1,202.1	48.91	25.580	
9,900.0	7,311.0	7,300.0	7,297.5	48.5	6.5	-63.48	-3,724.6	36.1	1,151.3	1,100.9	50.42	22.834	
10,000.0	7,311.0	7,300.0	7,297.5	50.2	6.5	-63.48	-3,724.6	36.1	1,051.6	999.7	51.94	20.248	
10,100.0	7,311.0	7,300.0	7,297.5	51.9	6.5	-63.48	-3,724.6	36.1	952.0	898.5	53.46	17.808	
10,200.0	7,311.0	7,300.0	7,297.5	53.6	6.5	-63.48	-3,724.6	36.1	852.4	797.5	54.98	15.504	
10,300.0	7,311.0	7,300.0	7,297.5	55.3	6.5	-63.48	-3,724.6	36.1	753.0	696.5	56.51	13.326	
10,400.0	7,311.0	7,300.0	7,297.5	57.0	6.5	-63.48	-3,724.6	36.1	653.8	595.7	58.04	11.265	
10,500.0	7,311.0	7,300.0	7,297.5	58.7	6.5	-63.48	-3,724.6	36.1	554.8	495.2	59.57	9.314	
10,600.0	7,311.0	7,300.0	7,297.5	60.5	6.5	-63.48	-3,724.6	36.1	456.3	395.2	61.10	7.467	
10,700.0	7,311.0	7,300.0	7,297.5	62.2	6.5	-63.48	-3,724.6	36.1	358.6	295.9	62.64	5.725	
10,800.0	7,311.0	7,300.0	7,297.5	63.9	6.5	-63.48	-3,724.6	36.1	262.6	198.4	64.18	4.092	
10,900.0	7,311.0	7,300.0	7,297.5	65.6	6.5	-63.48	-3,724.6	36.1	171.3	105.6	65.72	2.607	
11,000.0	7,311.0	7,300.0	7,297.5	67.3	6.5	-63.48	-3,724.6	36.1	98.7	31.4	67.26	1.467	Level 3
11,048.1	7,311.0	7,300.0	7,297.5	68.2	6.5	-63.48	-3,724.6	36.1	86.2	18.2	68.00	1.268	Level 3, CC, ES, SF
11,069.7	7,311.0	7,300.0	7,297.5	68.5	6.5	-63.48	-3,724.6	36.1	88.9	20.5	68.33	1.301	Level 3
11,100.0	7,311.0	7,300.0	7,297.5	69.1	6.5	-63.53	-3,724.6	36.1	100.6	31.8	68.83	1.461	Level 3
11,196.4	7,311.0	7,300.0	7,297.5	70.7	6.5	-64.02	-3,724.6	36.1	171.0	100.4	70.54	2.424	
11,200.0	7,311.0	7,300.0	7,297.5	70.8	6.5	-64.02	-3,724.6	36.1	174.0	103.4	70.59	2.465	
11,300.0	7,311.0	7,300.0	7,297.5	72.5	6.5	-64.02	-3,724.6	36.1	265.2	193.1	72.14	3.676	
11,400.0	7,311.0	7,300.0	7,297.5	74.2	6.5	-64.02	-3,724.6	36.1	361.1	287.4	73.70	4.899	
11,500.0	7,311.0	7,300.0	7,297.5	76.0	6.5	-64.02	-3,724.6	36.1	458.7	383.5	75.25	6.095	
11,600.0	7,311.0	7,300.0	7,297.5	77.7	6.5	-64.02	-3,724.6	36.1	557.2	480.4	76.81	7.254	
11,700.0	7,311.0	7,300.0	7,297.5	79.4	6.5	-64.02	-3,724.6	36.1	656.1	577.8	78.37	8.372	
11,800.0	7,311.0	7,300.0	7,297.5	81.2	6.5	-64.02	-3,724.6	36.1	755.3	675.4	79.93	9.450	
11,900.0	7,311.0	7,300.0	7,297.5	82.9	6.5	-64.02	-3,724.6	36.1	854.7	773.3	81.49	10.489	
12,000.0	7,311.0	7,300.0	7,297.5	84.6	6.5	-64.02	-3,724.6	36.1	954.3	871.2	83.05	11.491	
12,100.0	7,311.0	7,300.0	7,297.5	86.4	6.5	-64.02	-3,724.6	36.1	1,053.9	969.3	84.61	12.456	
12,200.0	7,311.0	7,300.0	7,297.5	88.1	6.5	-64.02	-3,724.6	36.1	1,153.6	1,067.4	86.17	13.387	
12,300.0	7,311.0	7,300.0	7,297.5	89.8	6.5	-64.02	-3,724.6	36.1	1,253.3	1,165.6	87.73	14.286	
12,400.0	7,311.0	7,300.0	7,297.5	91.6	6.5	-64.02	-3,724.6	36.1	1,353.1	1,263.8	89.30	15.153	
12,500.0	7,311.0	7,300.0	7,297.5	93.3	6.5	-64.02	-3,724.6	36.1	1,452.9	1,362.0	90.86	15.991	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 7910-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	34.85	236.8	164.9	289.6				
100.0	100.0	75.0	75.0	0.1	0.1	34.85	236.8	164.9	288.6	288.3	0.25	1,139.303	
200.0	200.0	175.0	175.0	0.3	0.3	34.85	236.8	164.9	288.6	288.0	0.60	479.057	
300.0	300.0	275.0	275.0	0.5	0.5	34.85	236.8	164.9	288.6	287.6	0.95	303.293	
400.0	400.0	375.0	375.0	0.6	0.7	34.85	236.8	164.9	288.6	287.3	1.30	221.885	
500.0	500.0	475.0	475.0	0.8	0.8	34.85	236.8	164.9	288.6	286.9	1.65	174.931	
600.0	600.0	575.0	575.0	1.0	1.0	34.85	236.8	164.9	288.6	286.6	2.00	144.378	
700.0	700.0	675.0	675.0	1.2	1.2	34.85	236.8	164.9	288.6	286.2	2.35	122.911	
800.0	800.0	775.0	775.0	1.3	1.4	34.85	236.8	164.9	288.6	285.9	2.70	107.001	
900.0	900.0	875.0	875.0	1.5	1.5	34.85	236.8	164.9	288.6	285.5	3.05	94.738	
1,000.0	1,000.0	975.0	975.0	1.7	1.7	34.85	236.8	164.9	288.6	285.2	3.39	84.997	
1,100.0	1,100.0	1,075.0	1,075.0	1.9	1.9	34.85	236.8	164.9	288.6	284.8	3.74	77.073	
1,200.0	1,200.0	1,175.0	1,175.0	2.0	2.1	34.85	236.8	164.9	288.6	284.5	4.09	70.500	
1,300.0	1,300.0	1,275.0	1,275.0	2.2	2.2	34.85	236.8	164.9	288.6	284.1	4.44	64.960	
1,400.0	1,400.0	1,375.0	1,375.0	2.4	2.4	34.85	236.8	164.9	288.6	283.8	4.79	60.227	
1,500.0	1,500.0	1,475.0	1,475.0	2.6	2.6	34.85	236.8	164.9	288.6	283.4	5.14	56.137	
1,600.0	1,600.0	1,575.0	1,575.0	2.7	2.7	34.85	236.8	164.9	288.6	283.1	5.49	52.567	
1,700.0	1,700.0	1,675.0	1,675.0	2.9	2.9	34.85	236.8	164.9	288.6	282.7	5.84	49.424	
1,800.0	1,800.0	1,775.0	1,775.0	3.1	3.1	34.85	236.8	164.9	288.6	282.4	6.19	46.636	
1,900.0	1,900.0	1,875.0	1,875.0	3.3	3.3	34.85	236.8	164.9	288.6	282.0	6.54	44.145	
2,000.0	2,000.0	1,975.0	1,975.0	3.4	3.4	34.85	236.8	164.9	288.6	281.7	6.89	41.907	
2,100.0	2,100.0	2,075.0	2,075.0	3.6	3.6	34.85	236.8	164.9	288.6	281.3	7.23	39.885	
2,200.0	2,200.0	2,175.0	2,175.0	3.8	3.8	34.85	236.8	164.9	288.6	281.0	7.58	38.050	
2,300.0	2,300.0	2,275.0	2,275.0	4.0	4.0	34.85	236.8	164.9	288.6	280.6	7.93	36.375	
2,400.0	2,400.0	2,375.0	2,375.0	4.1	4.1	34.85	236.8	164.9	288.6	280.3	8.28	34.842	
2,500.0	2,500.0	2,475.0	2,475.0	4.3	4.3	34.85	236.8	164.9	288.6	279.9	8.63	33.433	
2,600.0	2,600.0	2,575.0	2,575.0	4.5	4.5	34.85	236.8	164.9	288.6	279.6	8.98	32.133	
2,700.0	2,700.0	2,675.0	2,675.0	4.7	4.7	34.85	236.8	164.9	288.6	279.2	9.33	30.931	
2,800.0	2,800.0	2,775.0	2,775.0	4.8	4.8	34.85	236.8	164.9	288.6	278.9	9.68	29.815	
2,900.0	2,900.0	2,875.0	2,875.0	5.0	5.0	34.85	236.8	164.9	288.6	278.5	10.03	28.777	
3,000.0	3,000.0	2,975.0	2,975.0	5.2	5.2	34.85	236.8	164.9	288.6	278.2	10.38	27.809	
3,100.0	3,100.0	3,075.0	3,075.0	5.4	5.4	34.85	236.8	164.9	288.6	277.8	10.73	26.904	
3,200.0	3,200.0	3,175.0	3,175.0	5.5	5.5	34.85	236.8	164.9	288.6	277.5	11.07	26.056	
3,300.0	3,300.0	3,275.0	3,275.0	5.7	5.7	34.85	236.8	164.9	288.6	277.1	11.42	25.260	
3,400.0	3,400.0	3,375.0	3,375.0	5.9	5.9	34.85	236.8	164.9	288.6	276.8	11.77	24.511	
3,500.0	3,500.0	3,475.0	3,475.0	6.1	6.1	34.85	236.8	164.9	288.6	276.4	12.12	23.805	
3,600.0	3,600.0	3,575.0	3,575.0	6.2	6.2	34.85	236.8	164.9	288.6	276.1	12.47	23.139	
3,700.0	3,700.0	3,675.0	3,675.0	6.4	6.4	34.85	236.8	164.9	288.6	275.7	12.82	22.509	
3,800.0	3,800.0	3,775.0	3,775.0	6.6	6.6	34.85	236.8	164.9	288.6	275.4	13.17	21.912	
3,900.0	3,900.0	3,875.0	3,875.0	6.8	6.8	34.85	236.8	164.9	288.6	275.0	13.52	21.346	
4,000.0	4,000.0	3,975.0	3,975.0	6.9	6.9	34.85	236.8	164.9	288.6	274.7	13.87	20.809	
4,100.0	4,100.0	4,075.0	4,075.0	7.1	7.1	36.13	236.8	164.9	287.3	273.1	14.21	20.216	
4,200.0	4,199.9	4,174.9	4,174.9	7.3	7.3	36.71	236.8	164.9	283.7	269.2	14.55	19.493	
4,300.0	4,299.6	4,274.6	4,274.6	7.5	7.5	37.70	236.8	164.9	277.7	262.8	14.89	18.650	
4,321.5	4,321.0	4,296.0	4,296.0	7.5	7.5	37.97	236.8	164.9	276.1	261.2	14.96	18.454	
4,400.0	4,399.1	4,374.1	4,374.1	7.6	7.6	38.95	236.8	164.9	270.2	254.9	15.24	17.729	
4,500.0	4,498.7	4,473.7	4,473.7	7.8	7.8	40.28	236.8	164.9	262.7	247.1	15.59	16.848	
4,600.0	4,598.2	4,573.2	4,573.2	8.0	8.0	41.67	236.8	164.9	255.4	239.5	15.95	16.013	
4,700.0	4,697.7	4,672.7	4,672.7	8.2	8.2	43.15	236.8	164.9	248.3	232.0	16.31	15.223	
4,800.0	4,797.3	4,772.3	4,772.3	8.4	8.3	44.72	236.8	164.9	241.3	224.6	16.67	14.475	
4,900.0	4,896.8	4,871.8	4,871.8	8.6	8.5	46.37	236.8	164.9	234.5	217.5	17.03	13.768	
5,000.0	4,996.3	4,971.3	4,971.3	8.8	8.7	48.12	236.8	164.9	228.0	210.6	17.40	13.100	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - VOGL 5-5 (EXISTING) - KMG WELL - NO SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 7910-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,095.9	5,070.9	5,070.9	9.0	8.9	49.98	236.8	164.9	221.6	203.8	17.77	12.470	
5,200.0	5,195.4	5,170.4	5,170.4	9.2	9.0	51.94	236.8	164.9	215.5	197.4	18.14	11.878	
5,300.0	5,294.9	5,269.9	5,269.9	9.4	9.2	54.01	236.8	164.9	209.7	191.2	18.52	11.321	
5,400.0	5,394.5	5,369.5	5,369.5	9.6	9.4	56.19	236.8	164.9	204.1	185.2	18.90	10.800	
5,500.0	5,494.0	5,469.0	5,469.0	9.8	9.5	58.50	236.8	164.9	198.9	179.6	19.29	10.314	
5,600.0	5,593.5	5,568.5	5,568.5	10.0	9.7	60.92	236.8	164.9	194.0	174.4	19.67	9.863	
5,700.0	5,693.1	5,668.1	5,668.1	10.3	9.9	63.46	236.8	164.9	189.5	169.4	20.06	9.445	
5,800.0	5,792.6	5,767.6	5,767.6	10.5	10.1	66.12	236.8	164.9	185.4	164.9	20.46	9.061	
5,900.0	5,892.1	5,867.1	5,867.1	10.7	10.2	68.90	236.8	164.9	181.7	160.8	20.86	8.710	
6,000.0	5,991.7	5,966.7	5,966.7	10.9	10.4	71.78	236.8	164.9	178.4	157.1	21.26	8.393	
6,100.0	6,091.2	6,066.2	6,066.2	11.1	10.6	74.76	236.8	164.9	175.6	154.0	21.66	8.108	
6,200.0	6,190.7	6,165.7	6,165.7	11.3	10.8	77.83	236.8	164.9	173.3	151.3	22.06	7.855	
6,300.0	6,290.3	6,265.3	6,265.3	11.5	10.9	80.97	236.8	164.9	171.5	149.1	22.47	7.635	
6,400.0	6,389.8	6,364.8	6,364.8	11.8	11.1	84.16	236.8	164.9	170.3	147.4	22.87	7.446	
6,500.0	6,489.3	6,464.3	6,464.3	12.0	11.3	87.40	236.8	164.9	169.6	146.3	23.27	7.287	
6,580.2	6,569.1	6,544.1	6,544.1	12.2	11.4	90.00	236.8	164.9	169.4	145.8	23.59	7.181	CC
6,600.0	6,588.9	6,563.9	6,563.9	12.2	11.5	90.64	236.8	164.9	169.4	145.7	23.66	7.158	
6,694.3	6,682.7	6,657.7	6,657.7	12.4	11.6	93.71	236.8	164.9	169.7	145.7	24.03	7.062	
6,700.0	6,688.4	6,663.4	6,663.4	12.4	11.6	94.06	236.8	164.9	169.8	145.7	24.06	7.057	
6,750.0	6,738.3	6,713.3	6,713.3	12.5	11.7	-166.61	236.8	164.9	170.0	145.8	24.22	7.018	
6,800.0	6,788.3	6,763.3	6,763.3	12.6	11.8	-89.48	236.8	164.9	170.0	145.7	24.37	6.978	
6,830.9	6,819.0	6,794.0	6,794.0	12.6	11.9	-90.00	236.8	164.9	170.0	145.6	24.44	6.956	
6,850.0	6,837.8	6,812.8	6,812.8	12.6	11.9	-90.79	236.8	164.9	170.0	145.6	24.49	6.944	ES
6,900.0	6,886.6	6,861.6	6,861.6	12.6	12.0	-94.01	236.8	164.9	170.5	145.9	24.58	6.936	SF
6,950.0	6,934.3	6,909.3	6,909.3	12.6	12.1	-98.46	236.8	164.9	172.2	147.6	24.64	6.991	
7,000.0	6,980.4	6,955.4	6,955.4	12.6	12.1	-103.71	236.8	164.9	176.2	151.6	24.63	7.156	
7,050.0	7,024.8	6,999.8	6,999.8	12.6	12.2	-109.27	236.8	164.9	183.6	159.1	24.53	7.484	
7,100.0	7,066.9	7,041.9	7,041.9	12.6	12.3	-114.66	236.8	164.9	195.2	170.9	24.33	8.025	
7,150.0	7,106.5	7,081.5	7,081.5	12.5	12.4	-119.49	236.8	164.9	211.8	187.8	24.03	8.813	
7,200.0	7,143.4	7,118.4	7,118.4	12.6	12.4	-123.48	236.8	164.9	233.4	209.8	23.67	9.864	
7,250.0	7,177.1	7,152.1	7,152.1	12.6	12.5	-126.48	236.8	164.9	260.0	236.7	23.29	11.166	
7,300.0	7,207.5	7,182.5	7,182.5	12.7	12.5	-128.40	236.8	164.9	291.1	268.2	22.96	12.682	
7,350.0	7,234.4	7,209.4	7,209.4	12.8	12.6	-129.14	236.8	164.9	326.2	303.5	22.75	14.341	
7,400.0	7,257.4	7,232.4	7,232.4	13.0	12.6	-128.55	236.8	164.9	364.8	342.0	22.75	16.034	
7,450.0	7,276.5	7,251.5	7,251.5	13.2	12.7	-126.37	236.8	164.9	406.1	383.1	23.06	17.616	
7,500.0	7,291.6	7,266.6	7,266.6	13.5	12.7	-122.16	236.8	164.9	449.8	426.1	23.77	18.928	
7,550.0	7,302.3	7,277.3	7,277.3	13.8	12.7	-115.20	236.8	164.9	495.3	470.4	24.92	19.876	
7,600.0	7,308.8	7,283.8	7,283.8	14.2	12.7	-104.60	236.8	164.9	542.1	515.8	26.34	20.582	
7,649.7	7,311.0	7,286.0	7,286.0	14.6	12.7	-90.00	236.8	164.9	589.4	562.1	27.34	21.562	
7,700.0	7,311.0	7,286.0	7,286.0	15.1	12.7	-90.00	236.8	164.9	637.7	609.9	27.80	22.939	
7,800.0	7,311.0	7,286.0	7,286.0	16.1	12.7	-90.00	236.8	164.9	734.5	705.7	28.83	25.480	
7,900.0	7,311.0	7,286.0	7,286.0	17.3	12.7	-90.00	236.8	164.9	832.1	802.1	29.97	27.763	
8,000.0	7,311.0	7,286.0	7,286.0	18.5	12.7	-90.00	236.8	164.9	930.2	899.0	31.21	29.803	
8,100.0	7,311.0	7,286.0	7,286.0	19.8	12.7	-90.00	236.8	164.9	1,028.6	996.1	32.53	31.622	
8,200.0	7,311.0	7,286.0	7,286.0	21.2	12.7	-90.00	236.8	164.9	1,127.4	1,093.5	33.91	33.246	
8,300.0	7,311.0	7,286.0	7,286.0	22.6	12.7	-90.00	236.8	164.9	1,226.3	1,191.0	35.34	34.697	
8,400.0	7,311.0	7,286.0	7,286.0	24.1	12.7	-90.00	236.8	164.9	1,325.4	1,288.6	36.82	35.998	
8,500.0	7,311.0	7,286.0	7,286.0	25.6	12.7	-90.00	236.8	164.9	1,424.6	1,386.3	38.33	37.168	
8,600.0	7,311.0	7,286.0	7,286.0	27.2	12.7	-90.00	236.8	164.9	1,523.9	1,484.1	39.87	38.224	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - VOGL 5-8A (EXISTING) - KMG WELL - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,900.0	7,311.0	7,300.0	7,298.2	65.6	12.9	-80.99	-5,067.6	248.7	1,520.2	1,442.7	77.45	19.629	
11,000.0	7,311.0	7,300.0	7,298.2	67.3	12.9	-80.99	-5,067.6	248.7	1,422.3	1,343.2	79.15	17.971	
11,069.7	7,311.0	7,300.0	7,298.2	68.5	12.9	-80.99	-5,067.6	248.7	1,354.3	1,274.0	80.33	16.859	
11,100.0	7,311.0	7,300.0	7,298.2	69.1	12.9	-80.78	-5,067.6	248.7	1,324.8	1,244.0	80.80	16.395	
11,196.4	7,311.0	7,300.0	7,298.2	70.7	12.9	-80.09	-5,067.6	248.7	1,230.9	1,148.6	82.27	14.961	
11,200.0	7,311.0	7,300.0	7,298.2	70.8	12.9	-80.09	-5,067.6	248.7	1,227.4	1,145.1	82.33	14.907	
11,300.0	7,311.0	7,300.0	7,298.2	72.5	12.9	-80.09	-5,067.6	248.7	1,130.2	1,046.2	84.04	13.449	
11,400.0	7,311.0	7,300.0	7,298.2	74.2	12.9	-80.09	-5,067.6	248.7	1,033.6	947.8	85.74	12.055	
11,500.0	7,311.0	7,300.0	7,298.2	76.0	12.9	-80.09	-5,067.6	248.7	937.6	850.2	87.44	10.723	
11,600.0	7,311.0	7,300.0	7,298.2	77.7	12.9	-80.09	-5,067.6	248.7	842.6	753.5	89.15	9.452	
11,700.0	7,311.0	7,300.0	7,298.2	79.4	12.9	-80.09	-5,067.6	248.7	748.9	658.1	90.85	8.244	
11,800.0	7,311.0	7,300.0	7,298.2	81.2	12.9	-80.09	-5,067.6	248.7	657.1	564.6	92.56	7.099	
11,900.0	7,311.0	7,300.0	7,298.2	82.9	12.9	-80.09	-5,067.6	248.7	568.1	473.8	94.27	6.026	
12,000.0	7,311.0	7,300.0	7,298.2	84.6	12.9	-80.09	-5,067.6	248.7	483.3	387.3	95.98	5.036	
12,100.0	7,311.0	7,300.0	7,298.2	86.4	12.9	-80.09	-5,067.6	248.7	405.5	307.9	97.68	4.152	
12,200.0	7,311.0	7,300.0	7,298.2	88.1	12.9	-80.09	-5,067.6	248.7	339.6	240.2	99.39	3.417	
12,300.0	7,311.0	7,300.0	7,298.2	89.8	12.9	-80.09	-5,067.6	248.7	293.7	192.6	101.11	2.904	
12,395.6	7,311.0	7,300.0	7,298.2	91.5	12.9	-80.09	-5,067.6	248.7	277.7	174.9	102.74	2.703	CC
12,400.0	7,311.0	7,300.0	7,298.2	91.6	12.9	-80.09	-5,067.6	248.7	277.7	174.9	102.82	2.701	ES, SF
12,500.0	7,311.0	7,300.0	7,298.2	93.3	12.9	-80.09	-5,067.6	248.7	296.7	192.1	104.53	2.838	
12,600.0	7,311.0	7,300.0	7,298.2	95.0	12.9	-80.09	-5,067.6	248.7	344.8	238.6	106.24	3.246	
12,700.0	7,311.0	7,300.0	7,298.2	96.8	12.9	-80.09	-5,067.6	248.7	412.0	304.1	107.95	3.817	
12,800.0	7,311.0	7,300.0	7,298.2	98.5	12.9	-80.09	-5,067.6	248.7	490.6	380.9	109.67	4.473	
12,900.0	7,311.0	7,300.0	7,298.2	100.3	12.9	-80.09	-5,067.6	248.7	575.8	464.4	111.38	5.170	
13,000.0	7,311.0	7,300.0	7,298.2	102.0	12.9	-80.09	-5,067.6	248.7	665.2	552.1	113.10	5.881	
13,100.0	7,311.0	7,300.0	7,298.2	103.7	12.9	-80.09	-5,067.6	248.7	757.2	642.4	114.81	6.595	
13,200.0	7,311.0	7,300.0	7,298.2	105.5	12.9	-80.09	-5,067.6	248.7	851.0	734.5	116.53	7.303	
13,300.0	7,311.0	7,300.0	7,298.2	107.2	12.9	-80.09	-5,067.6	248.7	946.1	827.9	118.24	8.001	
13,400.0	7,311.0	7,300.0	7,298.2	109.0	12.9	-80.09	-5,067.6	248.7	1,042.1	922.1	119.96	8.687	
13,500.0	7,311.0	7,300.0	7,298.2	110.7	12.9	-80.09	-5,067.6	248.7	1,138.8	1,017.1	121.68	9.359	
13,600.0	7,311.0	7,300.0	7,298.2	112.4	12.9	-80.09	-5,067.6	248.7	1,236.0	1,112.6	123.39	10.017	
13,700.0	7,311.0	7,300.0	7,298.2	114.2	12.9	-80.09	-5,067.6	248.7	1,333.7	1,208.5	125.11	10.660	
13,800.0	7,311.0	7,300.0	7,298.2	115.9	12.9	-80.09	-5,067.6	248.7	1,431.6	1,304.8	126.83	11.288	
13,900.0	7,311.0	7,300.0	7,298.2	117.7	12.9	-80.09	-5,067.6	248.7	1,529.8	1,401.3	128.55	11.901	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
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	
366.3	366.3	367.3	367.3	0.6	0.6	-89.96	0.0	-11.2	11.2	10.0	1.18	9.508	CC
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	ES
500.0	500.0	500.8	500.8	0.8	0.8	-98.09	-1.7	-11.8	11.9	10.2	1.64	7.220	
600.0	600.0	600.7	600.7	1.0	1.0	-111.89	-5.2	-13.0	14.0	12.0	2.00	7.002	
700.0	700.0	700.7	700.5	1.2	1.2	-121.70	-8.8	-14.2	16.7	14.3	2.35	7.104	
800.0	800.0	800.6	800.4	1.3	1.4	-128.64	-12.3	-15.4	19.7	17.0	2.70	7.311	
900.0	900.0	900.5	900.2	1.5	1.6	-133.67	-15.9	-16.6	23.0	19.9	3.05	7.541	
1,000.0	1,000.0	1,000.5	1,000.1	1.7	1.7	-137.43	-19.4	-17.8	26.4	23.0	3.39	7.764	
1,100.0	1,100.0	1,100.4	1,100.0	1.9	1.9	-140.33	-22.9	-19.0	29.8	26.1	3.74	7.969	
1,200.0	1,200.0	1,200.3	1,199.8	2.0	2.1	-142.61	-26.5	-20.2	33.4	29.3	4.09	8.154	
1,300.0	1,300.0	1,300.3	1,299.7	2.2	2.3	-144.46	-30.0	-21.5	36.9	32.5	4.44	8.319	
1,400.0	1,400.0	1,400.2	1,399.5	2.4	2.5	-145.98	-33.6	-22.7	40.6	35.8	4.79	8.467	
1,500.0	1,500.0	1,500.1	1,499.4	2.6	2.7	-147.25	-37.1	-23.9	44.2	39.0	5.14	8.600	
1,600.0	1,600.0	1,600.0	1,599.2	2.7	2.9	-148.33	-40.7	-25.1	47.8	42.3	5.49	8.719	
1,700.0	1,700.0	1,700.0	1,699.1	2.9	3.0	-149.25	-44.2	-26.3	51.5	45.7	5.84	8.826	
1,800.0	1,800.0	1,799.9	1,799.0	3.1	3.2	-150.05	-47.8	-27.5	55.2	49.0	6.18	8.923	
1,900.0	1,900.0	1,899.8	1,898.8	3.3	3.4	-150.75	-51.3	-28.7	58.9	52.3	6.53	9.011	
2,000.0	2,000.0	1,999.8	1,998.7	3.4	3.6	-151.37	-54.9	-30.0	62.6	55.7	6.88	9.091	
2,100.0	2,100.0	2,099.7	2,098.5	3.6	3.8	-151.92	-58.4	-31.2	66.3	59.0	7.23	9.165	
2,200.0	2,200.0	2,199.6	2,198.4	3.8	4.0	-152.41	-62.0	-32.4	70.0	62.4	7.58	9.232	
2,300.0	2,300.0	2,299.6	2,298.3	4.0	4.2	-152.85	-65.5	-33.6	73.7	65.8	7.93	9.294	
2,400.0	2,400.0	2,399.5	2,398.1	4.1	4.3	-153.25	-69.1	-34.8	77.4	69.1	8.28	9.351	
2,500.0	2,500.0	2,499.4	2,498.0	4.3	4.5	-153.61	-72.6	-36.0	81.1	72.5	8.62	9.404	
2,600.0	2,600.0	2,599.3	2,597.8	4.5	4.7	-153.94	-76.2	-37.2	84.8	75.9	8.97	9.453	
2,700.0	2,700.0	2,699.3	2,697.7	4.7	4.9	-154.25	-79.7	-38.5	88.6	79.2	9.32	9.499	
2,800.0	2,800.0	2,799.2	2,797.6	4.8	5.1	-154.52	-83.3	-39.7	92.3	82.6	9.67	9.542	
2,900.0	2,900.0	2,899.1	2,897.4	5.0	5.3	-154.78	-86.8	-40.9	96.0	86.0	10.02	9.582	
3,000.0	3,000.0	2,999.1	2,997.3	5.2	5.5	-155.02	-90.3	-42.1	99.7	89.4	10.37	9.619	
3,100.0	3,100.0	3,099.0	3,097.1	5.4	5.6	-155.24	-93.9	-43.3	103.5	92.8	10.72	9.654	
3,200.0	3,200.0	3,198.9	3,197.0	5.5	5.8	-155.44	-97.4	-44.5	107.2	96.1	11.07	9.687	
3,300.0	3,300.0	3,298.8	3,296.9	5.7	6.0	-155.64	-101.0	-45.7	110.9	99.5	11.42	9.718	
3,400.0	3,400.0	3,398.8	3,396.7	5.9	6.2	-155.82	-104.5	-46.9	114.7	102.9	11.76	9.748	
3,500.0	3,500.0	3,498.7	3,496.6	6.1	6.4	-155.98	-108.1	-48.2	118.4	106.3	12.11	9.776	
3,600.0	3,600.0	3,598.6	3,596.4	6.2	6.6	-156.14	-111.6	-49.4	122.1	109.7	12.46	9.802	
3,700.0	3,700.0	3,698.6	3,696.3	6.4	6.8	-156.29	-115.2	-50.6	125.9	113.1	12.81	9.827	
3,800.0	3,800.0	3,798.5	3,796.2	6.6	6.9	-156.43	-118.7	-51.8	129.6	116.5	13.16	9.850	
3,900.0	3,900.0	3,898.4	3,896.0	6.8	7.1	-156.56	-122.3	-53.0	133.4	119.9	13.51	9.873	
4,000.0	4,000.0	3,998.4	3,995.9	6.9	7.3	-156.68	-125.8	-54.2	137.1	123.2	13.86	9.894	
4,100.0	4,100.0	4,098.2	4,095.7	7.1	7.5	-155.92	-129.4	-55.4	142.2	128.0	14.20	10.018	
4,200.0	4,199.9	4,197.9	4,195.3	7.3	7.7	-156.67	-132.9	-56.7	150.1	135.6	14.53	10.330	
4,300.0	4,299.6	4,297.3	4,294.6	7.5	7.9	-157.74	-136.4	-57.9	160.7	145.9	14.85	10.823	
4,321.5	4,321.0	4,318.6	4,315.9	7.5	7.9	-158.00	-137.2	-58.1	163.4	148.5	14.92	10.952	
4,400.0	4,399.1	4,396.4	4,393.6	7.6	8.1	-158.96	-140.0	-59.1	173.4	158.2	15.19	11.413	
4,500.0	4,498.7	4,495.5	4,492.7	7.8	8.2	-160.05	-143.5	-60.3	186.2	170.6	15.54	11.980	
4,600.0	4,598.2	4,594.6	4,591.7	8.0	8.4	-160.99	-147.0	-61.5	199.0	183.1	15.89	12.526	
4,700.0	4,697.7	4,693.8	4,690.8	8.2	8.6	-161.83	-150.5	-62.7	211.9	195.7	16.24	13.051	
4,800.0	4,797.3	4,792.9	4,789.8	8.4	8.8	-162.56	-154.0	-63.9	224.8	208.2	16.59	13.556	
4,900.0	4,896.8	4,892.0	4,888.9	8.6	9.0	-163.22	-157.5	-65.1	237.8	220.9	16.93	14.042	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,996.3	4,991.1	4,987.9	8.8	9.2	-163.80	-161.1	-66.3	250.8	233.5	17.28	14.510	
5,100.0	5,095.9	5,090.2	5,087.0	9.0	9.4	-164.33	-164.6	-67.5	263.8	246.1	17.63	14.961	
5,200.0	5,195.4	5,189.4	5,186.0	9.2	9.5	-164.81	-168.1	-68.7	276.8	258.8	17.98	15.395	
5,300.0	5,294.9	5,288.5	5,285.1	9.4	9.7	-165.25	-171.6	-69.9	289.9	271.5	18.33	15.814	
5,400.0	5,394.5	5,387.6	5,384.2	9.6	9.9	-165.65	-175.1	-71.1	302.9	284.2	18.68	16.217	
5,500.0	5,494.0	5,486.7	5,483.2	9.8	10.1	-166.01	-178.7	-72.3	316.0	297.0	19.03	16.607	
5,600.0	5,593.5	5,585.9	5,582.3	10.0	10.3	-166.35	-182.2	-73.5	329.1	309.7	19.38	16.983	
5,700.0	5,693.1	5,685.0	5,681.3	10.3	10.5	-166.66	-185.7	-74.7	342.2	322.4	19.73	17.347	
5,800.0	5,792.6	5,784.1	5,780.4	10.5	10.6	-166.95	-189.2	-75.9	355.3	335.2	20.07	17.698	
5,900.0	5,892.1	5,883.2	5,879.4	10.7	10.8	-167.22	-192.7	-77.1	368.4	348.0	20.42	18.038	
6,000.0	5,991.7	5,982.3	5,978.5	10.9	11.0	-167.47	-196.3	-78.3	381.5	360.7	20.77	18.367	
6,100.0	6,091.2	6,081.5	6,077.5	11.1	11.2	-167.70	-199.8	-79.5	394.6	373.5	21.12	18.685	
6,200.0	6,190.7	6,180.6	6,176.6	11.3	11.4	-167.92	-203.3	-80.7	407.8	386.3	21.47	18.993	
6,300.0	6,290.3	6,279.7	6,275.6	11.5	11.6	-168.12	-206.8	-81.9	420.9	399.1	21.82	19.291	
6,400.0	6,389.8	6,378.8	6,374.7	11.8	11.8	-168.31	-210.3	-83.1	434.0	411.9	22.17	19.581	
6,500.0	6,489.3	6,478.0	6,473.7	12.0	11.9	-168.49	-213.8	-84.3	447.2	424.7	22.52	19.861	
6,600.0	6,588.9	6,577.1	6,572.8	12.2	12.1	-168.67	-217.4	-85.5	460.3	437.5	22.86	20.134	
6,694.3	6,682.7	6,670.6	6,666.2	12.4	12.3	-168.82	-220.7	-86.7	472.8	449.6	23.19	20.383	
6,700.0	6,688.4	6,676.2	6,671.8	12.4	12.3	-168.66	-220.9	-86.8	473.5	450.3	23.23	20.385	
6,750.0	6,738.3	6,861.0	6,855.1	12.5	12.5	-69.66	-203.8	-88.6	473.1	449.4	23.70	19.964	
6,800.0	6,788.3	7,077.7	7,049.8	12.6	12.5	11.80	-111.8	-89.2	449.8	425.6	24.13	18.640	
6,850.0	6,837.8	7,202.0	7,141.5	12.6	12.6	20.04	-28.2	-88.8	412.0	387.7	24.33	16.933	
6,900.0	6,886.6	7,267.2	7,181.8	12.6	12.7	32.79	23.0	-88.4	367.9	343.4	24.49	15.018	
6,950.0	6,934.3	7,300.0	7,199.8	12.6	12.8	51.72	50.4	-88.1	321.1	296.2	24.85	12.921	
7,000.0	6,980.4	7,314.6	7,207.3	12.6	12.9	73.48	63.0	-88.0	273.4	248.2	25.28	10.815	
7,050.0	7,024.8	7,318.3	7,209.1	12.6	12.9	90.43	66.1	-87.9	226.2	200.8	25.38	8.912	
7,100.0	7,066.9	7,315.0	7,207.5	12.6	12.9	99.62	63.3	-88.0	180.4	155.1	25.23	7.148	
7,150.0	7,106.5	7,307.0	7,203.4	12.5	12.8	102.32	56.4	-88.0	137.7	112.6	25.11	5.485	
7,200.0	7,143.4	7,295.7	7,197.5	12.6	12.8	99.87	46.8	-88.1	102.0	76.9	25.14	4.056	
7,250.0	7,177.1	7,282.0	7,190.1	12.6	12.8	92.88	35.3	-88.3	81.7	56.4	25.29	3.230	
7,265.1	7,186.7	7,277.5	7,187.6	12.6	12.8	89.94	31.5	-88.3	80.4	55.1	25.32	3.175	SF
7,300.0	7,207.5	7,266.5	7,181.4	12.7	12.7	81.93	22.5	-88.4	86.9	61.7	25.25	3.442	
7,350.0	7,234.4	7,250.0	7,171.8	12.8	12.7	68.72	9.1	-88.5	113.0	88.4	24.63	4.590	
7,400.0	7,257.4	7,231.7	7,160.6	13.0	12.6	55.15	-5.4	-88.6	148.5	125.2	23.26	6.383	
7,450.0	7,276.5	7,213.0	7,148.7	13.2	12.6	43.77	-19.9	-88.7	187.1	165.5	21.57	8.673	
7,500.0	7,291.6	7,200.0	7,140.2	13.5	12.6	36.31	-29.7	-88.8	226.5	206.3	20.22	11.205	
7,550.0	7,302.3	7,173.4	7,122.1	13.8	12.6	28.44	-49.1	-88.9	265.4	246.7	18.71	14.187	
7,600.0	7,308.8	7,150.0	7,105.4	14.2	12.5	23.33	-65.6	-89.0	303.6	285.9	17.76	17.101	
7,649.7	7,311.0	7,132.2	7,092.2	14.6	12.5	19.98	-77.6	-89.1	340.4	323.2	17.25	19.729	
7,700.0	7,311.0	7,111.9	7,076.8	15.1	12.5	18.75	-90.8	-89.2	377.6	360.4	17.23	21.924	
7,800.0	7,311.0	7,076.1	7,048.5	16.1	12.5	16.83	-112.7	-89.2	455.2	438.0	17.26	26.373	
7,900.0	7,311.0	7,050.0	7,027.1	17.3	12.5	15.61	-127.5	-89.2	536.6	519.2	17.42	30.812	
8,000.0	7,311.0	7,019.3	7,001.0	18.5	12.5	14.33	-143.7	-89.2	620.9	603.4	17.55	35.379	
8,100.0	7,311.0	7,000.0	6,984.2	19.8	12.5	13.60	-153.2	-89.2	707.7	689.9	17.78	39.798	
8,200.0	7,311.0	6,976.9	6,963.6	21.2	12.5	12.80	-163.7	-89.1	796.2	778.2	17.99	44.269	
8,300.0	7,311.0	6,950.0	6,939.2	22.6	12.5	11.96	-175.0	-89.0	886.4	868.2	18.16	48.798	
8,400.0	7,311.0	6,950.0	6,939.2	24.1	12.5	11.96	-175.0	-89.0	977.6	959.1	18.53	52.771	
8,500.0	7,311.0	6,930.8	6,921.4	25.6	12.5	11.41	-182.3	-89.0	1,069.9	1,051.2	18.75	57.058	
8,600.0	7,311.0	6,918.7	6,910.1	27.2	12.5	11.09	-186.6	-88.9	1,163.2	1,144.1	19.02	61.142	
8,700.0	7,311.0	6,900.0	6,892.5	28.7	12.5	10.61	-192.8	-88.8	1,257.2	1,237.9	19.25	65.321	
8,800.0	7,311.0	6,900.0	6,892.5	30.3	12.5	10.61	-192.8	-88.8	1,351.7	1,332.1	19.59	68.981	
8,900.0	7,311.0	6,900.0	6,892.5	31.9	12.5	10.61	-192.8	-88.8	1,446.9	1,426.9	19.94	72.544	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,311.0	6,881.2	6,874.5	33.5	12.5	10.17	-198.4	-88.7	1,542.3	1,522.1	20.15	76.535	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	90.06	0.0	8.4	8.4				
100.0	100.0	101.0	101.0	0.1	0.1	90.06	0.0	8.4	8.4	8.1	0.25	34.068	
200.0	200.0	201.0	201.0	0.3	0.3	90.06	0.0	8.4	8.4	7.8	0.60	14.087	
300.0	300.0	301.0	301.0	0.5	0.5	90.06	0.0	8.4	8.4	7.4	0.94	8.879	
400.0	400.0	401.0	401.0	0.6	0.6	90.06	0.0	8.4	8.4	7.1	1.29	6.483	
500.0	500.0	501.0	501.0	0.8	0.8	90.06	0.0	8.4	8.4	6.7	1.64	5.105	
566.3	566.3	567.3	567.3	0.9	0.9	90.06	0.0	8.4	8.4	6.5	1.87	4.474	CC
600.0	600.0	601.0	601.0	1.0	1.0	90.06	0.0	8.4	8.4	6.4	1.99	4.210	ES
700.0	700.0	700.9	700.9	1.2	1.2	92.79	-0.4	9.2	9.2	6.8	2.34	3.917	SF
800.0	800.0	800.7	800.6	1.3	1.3	98.66	-1.7	11.4	11.6	8.9	2.69	4.305	
900.0	900.0	900.3	900.2	1.5	1.5	104.33	-3.9	15.2	15.7	12.7	3.04	5.180	
1,000.0	1,000.0	1,000.0	999.7	1.7	1.7	108.57	-6.9	20.5	21.7	18.3	3.39	6.405	
1,100.0	1,100.0	1,099.1	1,098.5	1.9	1.9	111.47	-10.7	27.3	29.4	25.7	3.73	7.878	
1,200.0	1,200.0	1,198.8	1,197.7	2.0	2.1	113.30	-15.0	34.7	38.0	33.9	4.08	9.300	
1,300.0	1,300.0	1,298.4	1,297.0	2.2	2.3	114.46	-19.2	42.2	46.5	42.1	4.43	10.503	
1,400.0	1,400.0	1,398.0	1,396.3	2.4	2.6	115.25	-23.4	49.7	55.1	50.3	4.78	11.534	
1,500.0	1,500.0	1,497.6	1,495.5	2.6	2.8	115.84	-27.7	57.1	63.7	58.6	5.13	12.427	
1,600.0	1,600.0	1,597.3	1,594.8	2.7	3.0	116.28	-31.9	64.6	72.3	66.8	5.48	13.206	
1,700.0	1,700.0	1,696.9	1,694.0	2.9	3.2	116.63	-36.1	72.1	80.9	75.1	5.82	13.894	
1,800.0	1,800.0	1,796.5	1,793.3	3.1	3.4	116.91	-40.4	79.5	89.5	83.3	6.17	14.504	
1,900.0	1,900.0	1,896.1	1,892.6	3.3	3.7	117.15	-44.6	87.0	98.1	91.6	6.52	15.049	
2,000.0	2,000.0	1,995.8	1,991.8	3.4	3.9	117.34	-48.8	94.4	106.7	99.8	6.87	15.539	
2,100.0	2,100.0	2,095.4	2,091.1	3.6	4.1	117.51	-53.1	101.9	115.3	108.1	7.22	15.982	
2,200.0	2,200.0	2,195.0	2,190.3	3.8	4.3	117.65	-57.3	109.4	123.9	116.4	7.56	16.384	
2,300.0	2,300.0	2,294.7	2,289.6	4.0	4.6	117.77	-61.5	116.8	132.5	124.6	7.91	16.751	
2,400.0	2,400.0	2,394.3	2,388.8	4.1	4.8	117.88	-65.8	124.3	141.1	132.9	8.26	17.087	
2,500.0	2,500.0	2,493.9	2,488.1	4.3	5.0	117.98	-70.0	131.8	149.8	141.1	8.61	17.396	
2,600.0	2,600.0	2,593.5	2,587.4	4.5	5.2	118.07	-74.2	139.2	158.4	149.4	8.96	17.681	
2,700.0	2,700.0	2,693.2	2,686.6	4.7	5.5	118.14	-78.5	146.7	167.0	157.7	9.30	17.945	
2,800.0	2,800.0	2,792.8	2,785.9	4.8	5.7	118.21	-82.7	154.1	175.6	165.9	9.65	18.189	
2,900.0	2,900.0	2,892.4	2,885.1	5.0	5.9	118.28	-86.9	161.6	184.2	174.2	10.00	18.417	
3,000.0	3,000.0	2,992.1	2,984.4	5.2	6.1	118.33	-91.2	169.1	192.8	182.5	10.35	18.629	
3,100.0	3,100.0	3,091.7	3,083.7	5.4	6.4	118.39	-95.4	176.5	201.4	190.7	10.70	18.828	
3,200.0	3,200.0	3,191.3	3,182.9	5.5	6.6	118.44	-99.6	184.0	210.0	199.0	11.05	19.014	
3,300.0	3,300.0	3,290.9	3,282.2	5.7	6.8	118.48	-103.9	191.5	218.6	207.2	11.39	19.189	
3,400.0	3,400.0	3,390.6	3,381.4	5.9	7.0	118.52	-108.1	198.9	227.2	215.5	11.74	19.353	
3,500.0	3,500.0	3,490.2	3,480.7	6.1	7.3	118.56	-112.3	206.4	235.9	223.8	12.09	19.508	
3,600.0	3,600.0	3,589.8	3,579.9	6.2	7.5	118.59	-116.6	213.9	244.5	232.0	12.44	19.654	
3,700.0	3,700.0	3,689.5	3,679.2	6.4	7.7	118.63	-120.8	221.3	253.1	240.3	12.79	19.792	
3,800.0	3,800.0	3,789.1	3,778.5	6.6	8.0	118.66	-125.0	228.8	261.7	248.6	13.13	19.923	
3,900.0	3,900.0	3,888.7	3,877.7	6.8	8.2	118.69	-129.3	236.2	270.3	256.8	13.48	20.048	
4,000.0	4,000.0	3,988.3	3,977.0	6.9	8.4	118.71	-133.5	243.7	278.9	265.1	13.83	20.166	
4,100.0	4,100.0	4,087.9	4,076.2	7.1	8.6	119.96	-137.7	251.2	288.3	274.1	14.17	20.339	
4,200.0	4,199.9	4,187.2	4,175.1	7.3	8.9	120.56	-142.0	258.6	299.2	284.6	14.51	20.612	
4,300.0	4,299.6	4,286.2	4,273.8	7.5	9.1	121.56	-146.2	266.0	311.6	296.8	14.85	20.983	
4,321.5	4,321.0	4,307.5	4,295.0	7.5	9.1	121.82	-147.1	267.6	314.6	299.6	14.92	21.076	
4,400.0	4,399.1	4,385.0	4,372.1	7.6	9.3	122.92	-150.4	273.4	325.4	310.2	15.20	21.404	
4,500.0	4,498.7	4,483.7	4,470.5	7.8	9.6	124.22	-154.6	280.8	339.3	323.8	15.56	21.809	
4,600.0	4,598.2	4,582.5	4,568.9	8.0	9.8	125.42	-158.8	288.2	353.4	337.5	15.92	22.202	
4,700.0	4,697.7	4,681.2	4,667.3	8.2	10.0	126.52	-162.9	295.6	367.7	351.4	16.28	22.582	
4,800.0	4,797.3	4,779.9	4,765.6	8.4	10.2	127.55	-167.1	303.0	382.1	365.4	16.65	22.950	
4,900.0	4,896.8	4,878.7	4,864.0	8.6	10.5	128.50	-171.3	310.4	396.5	379.5	17.02	23.305	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,996.3	4,977.4	4,962.4	8.8	10.7	129.38	-175.5	317.8	411.1	393.7	17.38	23.649	
5,100.0	5,095.9	5,076.2	5,060.7	9.0	10.9	130.20	-179.7	325.2	425.8	408.0	17.76	23.981	
5,200.0	5,195.4	5,174.9	5,159.1	9.2	11.1	130.97	-183.9	332.6	440.5	422.4	18.13	24.303	
5,300.0	5,294.9	5,273.6	5,257.5	9.4	11.4	131.68	-188.1	340.0	455.4	436.9	18.50	24.614	
5,400.0	5,394.5	5,372.4	5,355.9	9.6	11.6	132.35	-192.3	347.4	470.3	451.4	18.88	24.915	
5,500.0	5,494.0	5,471.1	5,454.2	9.8	11.8	132.99	-196.5	354.8	485.2	466.0	19.25	25.206	
5,600.0	5,593.5	5,569.9	5,552.6	10.0	12.1	133.58	-200.7	362.2	500.2	480.6	19.63	25.488	
5,700.0	5,693.1	5,668.6	5,651.0	10.3	12.3	134.14	-204.9	369.6	515.3	495.3	20.00	25.761	
5,800.0	5,792.6	5,767.3	5,749.4	10.5	12.5	134.66	-209.1	377.0	530.4	510.0	20.38	26.026	
5,900.0	5,892.1	5,866.1	5,847.7	10.7	12.7	135.16	-213.3	384.4	545.5	524.8	20.76	26.282	
6,000.0	5,991.7	5,964.8	5,946.1	10.9	13.0	135.63	-217.5	391.8	560.7	539.6	21.13	26.531	
6,100.0	6,091.2	6,063.5	6,044.5	11.1	13.2	136.08	-221.7	399.1	575.9	554.4	21.51	26.772	
6,200.0	6,190.7	6,162.3	6,142.8	11.3	13.4	136.50	-225.9	406.5	591.2	569.3	21.89	27.006	
6,300.0	6,290.3	6,261.0	6,241.2	11.5	13.6	136.90	-230.1	413.9	606.4	584.2	22.27	27.233	
6,400.0	6,389.8	6,359.8	6,339.6	11.8	13.9	137.29	-234.3	421.3	621.7	599.1	22.65	27.453	
6,500.0	6,489.3	6,458.5	6,438.0	12.0	14.1	137.65	-238.5	428.7	637.1	614.0	23.03	27.667	
6,600.0	6,588.9	6,743.2	6,717.7	12.2	14.5	135.97	-206.7	449.8	646.7	622.9	23.85	27.114	
6,694.3	6,682.7	7,102.3	6,995.2	12.4	14.8	119.99	10.9	470.6	614.5	589.2	25.28	24.308	
6,700.0	6,688.4	7,115.1	7,002.3	12.4	14.8	118.94	21.6	471.2	611.8	586.4	25.34	24.146	
6,750.0	6,738.3	7,196.8	7,041.3	12.5	15.1	-152.35	93.2	474.1	586.7	561.0	25.68	22.846	
6,800.0	6,788.3	7,239.8	7,057.6	12.6	15.3	-81.87	132.9	475.3	561.5	535.7	25.78	21.779	
6,850.0	6,837.8	7,260.9	7,064.5	12.6	15.4	-86.01	152.8	475.8	538.2	512.4	25.77	20.886	
6,900.0	6,886.6	7,268.9	7,067.0	12.6	15.4	-88.86	160.5	476.0	518.1	492.4	25.71	20.149	
6,950.0	6,934.3	7,268.6	7,066.9	12.6	15.4	-90.37	160.2	476.0	502.1	476.4	25.65	19.577	
7,000.0	6,980.4	7,262.8	7,065.1	12.6	15.4	-90.79	154.7	475.9	490.6	465.0	25.58	19.180	
7,050.0	7,024.8	7,253.2	7,062.1	12.6	15.3	-90.27	145.5	475.7	483.9	458.4	25.52	18.966	
7,093.3	7,061.4	7,242.6	7,058.6	12.6	15.3	-89.19	135.5	475.4	482.1	456.6	25.48	18.923	
7,100.0	7,066.9	7,240.8	7,058.0	12.6	15.3	-88.97	133.9	475.3	482.1	456.7	25.47	18.929	
7,150.0	7,106.5	7,226.3	7,052.8	12.5	15.2	-87.01	120.4	475.0	485.1	459.7	25.44	19.069	
7,200.0	7,143.4	7,210.3	7,046.7	12.6	15.1	-84.47	105.5	474.5	492.4	467.0	25.40	19.381	
7,250.0	7,177.1	7,193.1	7,039.7	12.6	15.1	-81.46	89.8	474.0	503.5	478.1	25.36	19.854	
7,300.0	7,207.5	7,174.8	7,031.8	12.7	15.0	-78.09	73.4	473.4	517.9	492.6	25.29	20.478	
7,350.0	7,234.4	7,150.0	7,020.2	12.8	14.9	-73.91	51.5	472.5	534.9	509.8	25.11	21.299	
7,400.0	7,257.4	7,136.2	7,013.3	13.0	14.9	-70.69	39.6	472.0	553.9	528.9	24.98	22.170	
7,450.0	7,276.5	7,116.1	7,002.8	13.2	14.8	-66.88	22.4	471.2	574.3	549.6	24.74	23.213	
7,500.0	7,291.6	7,100.0	6,993.9	13.5	14.8	-63.46	9.0	470.5	595.8	571.3	24.50	24.313	
7,550.0	7,302.3	7,074.6	6,979.2	13.8	14.7	-59.52	-11.7	469.4	617.6	593.5	24.15	25.578	
7,600.0	7,308.8	7,050.0	6,964.1	14.2	14.7	-55.91	-31.1	468.3	639.7	615.8	23.83	26.848	
7,649.7	7,311.0	7,032.0	6,952.5	14.6	14.7	-52.96	-44.8	467.4	661.3	637.7	23.64	27.976	
7,700.0	7,311.0	7,000.0	6,930.9	15.1	14.6	-51.25	-68.4	465.8	684.0	660.4	23.67	28.899	
7,800.0	7,311.0	6,973.1	6,911.8	16.1	14.6	-49.80	-87.2	464.4	734.1	709.9	24.17	30.370	
7,900.0	7,311.0	6,950.0	6,894.6	17.3	14.6	-48.54	-102.6	463.1	790.8	766.1	24.76	31.942	
8,000.0	7,311.0	6,900.0	6,855.5	18.5	14.5	-45.82	-133.6	460.1	853.1	828.1	25.02	34.094	
8,100.0	7,311.0	6,885.1	6,843.3	19.8	14.5	-45.02	-142.1	459.2	920.1	894.3	25.75	35.737	
8,200.0	7,311.0	6,850.0	6,813.8	21.2	14.5	-43.14	-161.0	457.0	991.6	965.4	26.18	37.878	
8,300.0	7,311.0	6,850.0	6,813.8	22.6	14.5	-43.14	-161.0	457.0	1,066.3	1,039.2	27.14	39.284	
8,400.0	7,311.0	6,824.4	6,791.5	24.1	14.5	-41.80	-173.6	455.3	1,144.1	1,116.4	27.70	41.302	
8,500.0	7,311.0	6,800.0	6,769.9	25.6	14.5	-40.55	-184.6	453.7	1,224.7	1,196.4	28.26	43.342	
8,600.0	7,311.0	6,800.0	6,769.9	27.2	14.5	-40.55	-184.6	453.7	1,307.2	1,278.0	29.24	44.702	
8,700.0	7,311.0	6,780.8	6,752.5	28.7	14.5	-39.58	-192.7	452.4	1,391.7	1,361.8	29.86	46.602	
8,800.0	7,311.0	6,768.9	6,741.6	30.3	14.5	-38.99	-197.4	451.6	1,477.7	1,447.1	30.61	48.270	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	90.05	0.0	27.9	27.9				
100.0	100.0	101.0	101.0	0.1	0.1	90.05	0.0	27.9	27.9	27.7	0.25	113.561	
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	27.9	27.9	27.4	0.60	46.956	
266.3	266.3	267.3	267.3	0.4	0.4	90.05	0.0	27.9	27.9	27.1	0.83	33.805	CC
300.0	300.0	301.0	301.0	0.5	0.5	90.05	0.0	27.9	27.9	27.0	0.94	29.597	ES
400.0	400.0	400.5	400.5	0.6	0.6	90.52	-0.3	28.8	28.8	27.5	1.29	22.283	
500.0	500.0	500.0	500.0	0.8	0.8	91.76	-1.0	31.3	31.3	29.7	1.64	19.100	
600.0	600.0	599.3	599.2	1.0	1.0	93.43	-2.1	35.5	35.6	33.6	1.99	17.890	
700.0	700.0	698.5	698.2	1.2	1.2	95.18	-3.7	41.3	41.6	39.2	2.34	17.781	SF
800.0	800.0	797.4	796.8	1.3	1.4	96.81	-5.8	48.7	49.3	46.6	2.68	18.349	
900.0	900.0	896.0	895.0	1.5	1.6	98.22	-8.3	57.8	58.7	55.7	3.03	19.362	
1,000.0	1,000.0	994.3	992.6	1.7	1.9	99.39	-11.3	68.4	69.9	66.5	3.38	20.683	
1,100.0	1,100.0	1,093.1	1,090.7	1.9	2.1	100.33	-14.6	80.3	82.3	78.6	3.72	22.104	
1,200.0	1,200.0	1,192.4	1,189.1	2.0	2.4	101.02	-18.0	92.4	94.9	90.8	4.07	23.303	
1,300.0	1,300.0	1,291.6	1,287.5	2.2	2.7	101.56	-21.4	104.4	107.4	103.0	4.42	24.316	
1,400.0	1,400.0	1,390.8	1,385.9	2.4	2.9	101.98	-24.7	116.5	120.0	115.2	4.77	25.183	
1,500.0	1,500.0	1,490.0	1,484.3	2.6	3.2	102.32	-28.1	128.5	132.6	127.5	5.11	25.933	
1,600.0	1,600.0	1,589.2	1,582.7	2.7	3.5	102.61	-31.4	140.5	145.2	139.7	5.46	26.589	
1,700.0	1,700.0	1,688.4	1,681.1	2.9	3.7	102.84	-34.8	152.6	157.7	151.9	5.81	27.167	
1,800.0	1,800.0	1,787.6	1,779.6	3.1	4.0	103.05	-38.1	164.6	170.3	164.2	6.15	27.680	
1,900.0	1,900.0	1,886.8	1,878.0	3.3	4.3	103.22	-41.5	176.7	182.9	176.4	6.50	28.139	
2,000.0	2,000.0	1,986.0	1,976.4	3.4	4.6	103.37	-44.9	188.7	195.5	188.7	6.85	28.551	
2,100.0	2,100.0	2,085.2	2,074.8	3.6	4.8	103.51	-48.2	200.7	208.1	200.9	7.19	28.924	
2,200.0	2,200.0	2,184.4	2,173.2	3.8	5.1	103.63	-51.6	212.8	220.7	213.2	7.54	29.262	
2,300.0	2,300.0	2,283.6	2,271.6	4.0	5.4	103.73	-54.9	224.8	233.3	225.4	7.89	29.571	
2,400.0	2,400.0	2,382.8	2,370.0	4.1	5.7	103.83	-58.3	236.9	245.9	237.6	8.24	29.854	
2,500.0	2,500.0	2,482.0	2,468.4	4.3	6.0	103.91	-61.6	248.9	258.5	249.9	8.58	30.114	
2,600.0	2,600.0	2,581.2	2,566.9	4.5	6.2	103.99	-65.0	260.9	271.1	262.1	8.93	30.354	
2,700.0	2,700.0	2,680.4	2,665.3	4.7	6.5	104.06	-68.4	273.0	283.7	274.4	9.28	30.576	
2,800.0	2,800.0	2,779.6	2,763.7	4.8	6.8	104.13	-71.7	285.0	296.3	286.6	9.62	30.782	
2,900.0	2,900.0	2,878.8	2,862.1	5.0	7.1	104.18	-75.1	297.1	308.9	298.9	9.97	30.973	
3,000.0	3,000.0	2,978.0	2,960.5	5.2	7.3	104.24	-78.4	309.1	321.5	311.1	10.32	31.152	
3,100.0	3,100.0	3,077.2	3,058.9	5.4	7.6	104.29	-81.8	321.1	334.0	323.4	10.67	31.319	
3,200.0	3,200.0	3,176.4	3,157.3	5.5	7.9	104.34	-85.2	333.2	346.6	335.6	11.01	31.476	
3,300.0	3,300.0	3,275.6	3,255.7	5.7	8.2	104.38	-88.5	345.2	359.2	347.9	11.36	31.623	
3,400.0	3,400.0	3,374.8	3,354.2	5.9	8.5	104.42	-91.9	357.3	371.8	360.1	11.71	31.762	
3,500.0	3,500.0	3,474.0	3,452.6	6.1	8.7	104.46	-95.2	369.3	384.4	372.4	12.05	31.892	
3,600.0	3,600.0	3,573.2	3,551.0	6.2	9.0	104.50	-98.6	381.3	397.0	384.6	12.40	32.015	
3,700.0	3,700.0	3,672.4	3,649.4	6.4	9.3	104.53	-101.9	393.4	409.6	396.9	12.75	32.132	
3,800.0	3,800.0	3,771.6	3,747.8	6.6	9.6	104.56	-105.3	405.4	422.2	409.1	13.10	32.242	
3,900.0	3,900.0	3,870.8	3,846.2	6.8	9.8	104.59	-108.7	417.5	434.8	421.4	13.44	32.346	
4,000.0	4,000.0	3,970.0	3,944.6	6.9	10.1	104.62	-112.0	429.5	447.4	433.6	13.79	32.446	
4,100.0	4,100.0	4,069.2	4,043.0	7.1	10.4	105.70	-115.4	441.5	460.4	446.3	14.13	32.576	
4,200.0	4,199.9	4,168.1	4,141.1	7.3	10.7	106.02	-118.7	453.5	474.3	459.8	14.48	32.762	
4,300.0	4,299.6	4,266.8	4,239.0	7.5	11.0	106.63	-122.1	465.5	489.0	474.2	14.82	32.998	
4,321.5	4,321.0	4,288.0	4,260.0	7.5	11.0	106.80	-122.8	468.1	492.3	477.4	14.89	33.055	
4,400.0	4,399.1	4,365.2	4,336.6	7.6	11.2	107.61	-125.4	477.4	504.4	489.3	15.17	33.252	
4,500.0	4,498.7	4,463.5	4,434.2	7.8	11.5	108.59	-128.7	489.4	520.1	504.5	15.53	33.491	
4,600.0	4,598.2	4,561.9	4,531.8	8.0	11.8	109.51	-132.1	501.3	535.8	519.9	15.89	33.718	
4,700.0	4,697.7	4,660.3	4,629.4	8.2	12.1	110.38	-135.4	513.3	551.7	535.5	16.26	33.933	
4,800.0	4,797.3	4,758.7	4,727.0	8.4	12.3	111.20	-138.7	525.2	567.7	551.1	16.63	34.137	
4,900.0	4,896.8	4,857.1	4,824.6	8.6	12.6	111.97	-142.0	537.1	583.9	566.9	17.01	34.331	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,996.3	4,955.5	4,922.2	8.8	12.9	112.70	-145.4	549.1	600.1	582.7	17.39	34.516	
5,100.0	5,095.9	5,053.9	5,019.8	9.0	13.2	113.40	-148.7	561.0	616.4	598.6	17.77	34.692	
5,200.0	5,195.4	5,152.3	5,117.5	9.2	13.5	114.06	-152.0	573.0	632.8	614.6	18.15	34.860	
5,300.0	5,294.9	5,250.7	5,215.1	9.4	13.7	114.69	-155.4	584.9	649.3	630.7	18.54	35.021	
5,400.0	5,394.5	5,349.1	5,312.7	9.6	14.0	115.28	-158.7	596.9	665.8	646.9	18.93	35.175	
5,500.0	5,494.0	5,447.4	5,410.3	9.8	14.3	115.85	-162.0	608.8	682.4	663.1	19.32	35.323	
5,600.0	5,593.5	5,545.8	5,507.9	10.0	14.6	116.39	-165.4	620.7	699.1	679.4	19.71	35.465	
5,700.0	5,693.1	5,644.2	5,605.5	10.3	14.8	116.90	-168.7	632.7	715.8	695.7	20.11	35.601	
5,800.0	5,792.6	5,742.6	5,703.1	10.5	15.1	117.39	-172.0	644.6	732.6	712.1	20.50	35.733	
5,900.0	5,892.1	5,841.0	5,800.7	10.7	15.4	117.86	-175.3	656.6	749.4	728.5	20.90	35.859	
6,000.0	5,991.7	5,939.4	5,898.3	10.9	15.7	118.31	-178.7	668.5	766.3	745.0	21.30	35.981	
6,100.0	6,091.2	6,037.8	5,995.9	11.1	15.9	118.74	-182.0	680.4	783.3	761.6	21.70	36.098	
6,200.0	6,190.7	6,136.2	6,093.5	11.3	16.2	119.15	-185.3	692.4	800.2	778.1	22.10	36.212	
6,300.0	6,290.3	6,234.6	6,191.1	11.5	16.5	119.54	-188.7	704.3	817.2	794.7	22.50	36.321	
6,400.0	6,389.8	6,333.0	6,288.7	11.8	16.8	119.92	-192.0	716.3	834.3	811.4	22.90	36.427	
6,500.0	6,489.3	6,431.4	6,386.3	12.0	17.1	120.29	-195.3	728.2	851.3	828.0	23.31	36.530	
6,600.0	6,588.9	6,529.7	6,483.9	12.2	17.3	120.63	-198.7	740.1	868.4	844.7	23.71	36.630	
6,694.3	6,682.7	6,622.6	6,576.0	12.4	17.6	120.95	-201.8	751.4	884.6	860.5	24.09	36.721	
6,700.0	6,688.4	6,628.1	6,581.6	12.4	17.6	121.23	-202.0	752.1	885.6	861.4	24.13	36.707	
6,750.0	6,738.3	6,677.6	6,630.6	12.5	17.7	-139.54	-203.7	758.1	892.8	868.5	24.38	36.618	
6,800.0	6,788.3	6,727.2	6,679.8	12.6	17.9	-61.45	-205.3	764.1	897.9	873.4	24.56	36.565	
6,850.0	6,837.8	6,885.8	6,836.3	12.6	18.3	-63.00	-193.4	783.3	898.9	874.1	24.84	36.193	
6,900.0	6,886.6	7,050.8	6,989.3	12.6	18.5	-69.15	-135.9	802.0	891.3	866.2	25.08	35.530	
6,950.0	6,934.3	7,150.7	7,071.7	12.6	18.7	-75.26	-80.6	812.1	879.3	854.1	25.20	34.893	
7,000.0	6,980.4	7,207.1	7,113.6	12.6	18.8	-79.87	-43.2	817.2	866.6	841.4	25.26	34.311	
7,050.0	7,024.8	7,237.4	7,134.6	12.6	18.8	-82.98	-21.5	819.7	854.9	829.7	25.24	33.866	
7,100.0	7,066.9	7,251.9	7,144.1	12.6	18.9	-84.90	-10.8	820.9	845.2	820.0	25.21	33.524	
7,150.0	7,106.5	7,256.3	7,147.0	12.5	18.9	-85.91	-7.4	821.3	837.9	812.7	25.20	33.252	
7,200.0	7,143.4	7,254.0	7,145.5	12.6	18.9	-86.21	-9.2	821.1	833.2	808.0	25.20	33.062	
7,250.0	7,177.1	7,247.1	7,141.0	12.6	18.8	-85.92	-14.4	820.5	831.1	805.9	25.23	32.943	
7,264.7	7,186.4	7,244.4	7,139.2	12.6	18.8	-85.75	-16.4	820.3	831.0	805.7	25.25	32.914	
7,300.0	7,207.5	7,236.8	7,134.2	12.7	18.8	-85.17	-21.9	819.7	831.6	806.3	25.29	32.880	
7,350.0	7,234.4	7,224.2	7,125.5	12.8	18.8	-84.01	-31.2	818.6	834.6	809.2	25.39	32.872	
7,400.0	7,257.4	7,209.6	7,115.4	13.0	18.8	-82.53	-41.5	817.4	839.9	814.3	25.50	32.932	
7,450.0	7,276.5	7,193.6	7,103.9	13.2	18.7	-80.77	-52.6	816.0	847.2	821.5	25.64	33.043	
7,500.0	7,291.6	7,176.5	7,091.3	13.5	18.7	-78.80	-64.0	814.5	856.2	830.4	25.81	33.175	
7,550.0	7,302.3	7,158.5	7,077.7	13.8	18.7	-76.66	-75.7	812.8	866.8	840.8	26.00	33.345	
7,600.0	7,308.8	7,139.7	7,063.1	14.2	18.6	-74.41	-87.4	811.0	878.6	852.4	26.21	33.529	
7,649.7	7,311.0	7,120.4	7,047.8	14.6	18.6	-72.11	-98.9	809.1	891.3	864.9	26.44	33.710	
7,700.0	7,311.0	7,100.0	7,031.1	15.1	18.6	-71.01	-110.5	807.1	905.5	878.7	26.77	33.821	
7,800.0	7,311.0	7,069.0	7,005.0	16.1	18.5	-69.32	-127.0	803.9	939.6	912.0	27.56	34.091	
7,900.0	7,311.0	7,050.0	6,988.6	17.3	18.5	-68.27	-136.3	801.9	981.2	952.7	28.50	34.429	
8,000.0	7,311.0	7,018.5	6,960.7	18.5	18.5	-66.51	-150.7	798.5	1,029.6	1,000.2	29.40	35.016	
8,100.0	7,311.0	7,000.0	6,944.0	19.8	18.4	-65.47	-158.3	796.4	1,084.3	1,053.9	30.45	35.615	
8,200.0	7,311.0	6,981.5	6,927.1	21.2	18.4	-64.43	-165.4	794.4	1,144.5	1,113.0	31.51	36.316	
8,300.0	7,311.0	6,966.7	6,913.3	22.6	18.4	-63.59	-170.8	792.7	1,209.5	1,176.8	32.64	37.055	
8,400.0	7,311.0	6,950.0	6,897.7	24.1	18.4	-62.65	-176.3	790.8	1,278.6	1,244.9	33.76	37.876	
8,500.0	7,311.0	6,950.0	6,897.7	25.6	18.4	-62.65	-176.3	790.8	1,351.4	1,316.3	35.09	38.507	
8,600.0	7,311.0	6,931.8	6,880.6	27.2	18.3	-61.62	-181.8	788.7	1,427.1	1,390.9	36.20	39.417	
8,700.0	7,311.0	6,922.7	6,871.8	28.7	18.3	-61.11	-184.4	787.6	1,505.5	1,468.0	37.44	40.211	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-19.6	19.6				
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	-19.6	19.6	19.3	0.24	80.060	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-19.6	19.6	19.0	0.59	32.966	CC, ES
300.0	300.0	299.7	299.7	0.5	0.5	-88.29	0.6	-20.2	20.2	19.3	0.94	21.448	
400.0	400.0	399.4	399.4	0.6	0.7	-83.91	2.4	-22.1	22.3	21.0	1.29	17.217	
500.0	500.0	499.0	498.8	0.8	0.8	-78.21	5.3	-25.3	25.9	24.2	1.64	15.748	
600.0	600.0	598.6	598.3	1.0	1.0	-72.74	9.2	-29.6	31.0	29.0	1.99	15.562	
700.0	700.0	698.4	698.0	1.2	1.2	-68.73	13.2	-34.0	36.5	34.2	2.34	15.592	
800.0	800.0	798.3	797.6	1.3	1.4	-65.79	17.3	-38.4	42.2	39.5	2.69	15.667	
900.0	900.0	898.1	897.2	1.5	1.6	-63.55	21.3	-42.8	47.9	44.9	3.04	15.754	
1,000.0	1,000.0	997.9	996.9	1.7	1.8	-61.78	25.3	-47.2	53.7	50.3	3.39	15.841	
1,100.0	1,100.0	1,097.7	1,096.5	1.9	2.0	-60.36	29.4	-51.6	59.5	55.8	3.74	15.923	
1,200.0	1,200.0	1,197.5	1,196.2	2.0	2.2	-59.20	33.4	-56.1	65.4	61.3	4.09	15.998	
1,300.0	1,300.0	1,297.4	1,295.8	2.2	2.4	-58.22	37.5	-60.5	71.2	66.8	4.43	16.067	
1,400.0	1,400.0	1,397.2	1,395.4	2.4	2.6	-57.40	41.5	-64.9	77.1	72.4	4.78	16.129	
1,500.0	1,500.0	1,497.0	1,495.1	2.6	2.8	-56.69	45.5	-69.3	83.0	77.9	5.13	16.186	
1,600.0	1,600.0	1,596.8	1,594.7	2.7	3.0	-56.08	49.6	-73.7	89.0	83.5	5.48	16.237	
1,700.0	1,700.0	1,696.6	1,694.4	2.9	3.2	-55.54	53.6	-78.1	94.9	89.1	5.83	16.284	
1,800.0	1,800.0	1,796.5	1,794.0	3.1	3.4	-55.07	57.6	-82.5	100.8	94.7	6.18	16.326	
1,900.0	1,900.0	1,896.3	1,893.7	3.3	3.6	-54.64	61.7	-86.9	106.8	100.2	6.52	16.365	
2,000.0	2,000.0	1,996.1	1,993.3	3.4	3.9	-54.27	65.7	-91.3	112.7	105.8	6.87	16.401	
2,100.0	2,100.0	2,095.9	2,092.9	3.6	4.1	-53.93	69.7	-95.7	118.7	111.4	7.22	16.433	
2,200.0	2,200.0	2,195.8	2,192.6	3.8	4.3	-53.62	73.8	-100.2	124.6	117.0	7.57	16.464	
2,300.0	2,300.0	2,295.6	2,292.2	4.0	4.5	-53.34	77.8	-104.6	130.6	122.7	7.92	16.491	
2,400.0	2,400.0	2,395.4	2,391.9	4.1	4.7	-53.09	81.9	-109.0	136.5	128.3	8.27	16.517	
2,500.0	2,500.0	2,495.2	2,491.5	4.3	4.9	-52.85	85.9	-113.4	142.5	133.9	8.61	16.541	
2,600.0	2,600.0	2,595.0	2,591.1	4.5	5.1	-52.64	89.9	-117.8	148.5	139.5	8.96	16.564	
2,700.0	2,700.0	2,694.9	2,690.8	4.7	5.3	-52.44	94.0	-122.2	154.4	145.1	9.31	16.585	
2,800.0	2,800.0	2,794.7	2,790.4	4.8	5.5	-52.26	98.0	-126.6	160.4	150.7	9.66	16.604	
2,900.0	2,900.0	2,894.5	2,890.1	5.0	5.7	-52.09	102.0	-131.0	166.4	156.4	10.01	16.623	
3,000.0	3,000.0	2,994.3	2,989.7	5.2	5.9	-51.93	106.1	-135.4	172.3	162.0	10.36	16.640	
3,100.0	3,100.0	3,094.1	3,089.3	5.4	6.1	-51.78	110.1	-139.8	178.3	167.6	10.71	16.656	
3,200.0	3,200.0	3,194.0	3,189.0	5.5	6.3	-51.65	114.1	-144.3	184.3	173.2	11.05	16.671	
3,300.0	3,300.0	3,293.8	3,288.6	5.7	6.5	-51.52	118.2	-148.7	190.3	178.9	11.40	16.686	
3,400.0	3,400.0	3,393.6	3,388.3	5.9	6.7	-51.39	122.2	-153.1	196.2	184.5	11.75	16.699	
3,500.0	3,500.0	3,493.4	3,487.9	6.1	6.9	-51.28	126.3	-157.5	202.2	190.1	12.10	16.712	
3,600.0	3,600.0	3,593.2	3,587.6	6.2	7.1	-51.17	130.3	-161.9	208.2	195.7	12.45	16.724	
3,700.0	3,700.0	3,693.1	3,687.2	6.4	7.3	-51.07	134.3	-166.3	214.2	201.4	12.80	16.736	
3,800.0	3,800.0	3,792.9	3,786.8	6.6	7.5	-50.97	138.4	-170.7	220.1	207.0	13.15	16.747	
3,900.0	3,900.0	3,892.7	3,886.5	6.8	7.7	-50.88	142.4	-175.1	226.1	212.6	13.49	16.758	
4,000.0	4,000.0	3,992.5	3,986.1	6.9	7.9	-50.80	146.4	-179.5	232.1	218.3	13.84	16.768	
4,100.0	4,100.0	4,092.4	4,085.8	7.1	8.1	-49.83	150.5	-183.9	237.1	222.9	14.20	16.702	
4,200.0	4,199.9	4,192.3	4,185.5	7.3	8.3	-50.52	154.5	-188.4	240.2	225.7	14.55	16.511	
4,300.0	4,299.6	4,292.1	4,285.2	7.5	8.5	-51.78	158.6	-192.8	241.5	226.6	14.90	16.204	
4,321.5	4,321.0	4,313.6	4,306.7	7.5	8.6	-52.13	159.4	-193.7	241.5	226.5	14.98	16.124	
4,400.0	4,399.1	4,391.9	4,384.8	7.6	8.7	-53.43	162.6	-197.2	241.6	226.3	15.26	15.828	
4,500.0	4,498.7	4,491.6	4,484.3	7.8	8.9	-55.09	166.6	-201.6	241.9	226.3	15.63	15.475	
4,600.0	4,598.2	4,591.4	4,583.9	8.0	9.1	-56.75	170.7	-206.0	242.4	226.4	16.00	15.145	
4,700.0	4,697.7	4,691.1	4,683.5	8.2	9.3	-58.39	174.7	-210.4	243.1	226.7	16.38	14.838	
4,800.0	4,797.3	4,790.9	4,783.1	8.4	9.5	-60.03	178.7	-214.8	244.0	227.2	16.77	14.552	
4,900.0	4,896.8	4,890.7	4,882.6	8.6	9.7	-61.65	182.8	-219.2	245.1	227.9	17.15	14.287	
5,000.0	4,996.3	4,990.4	4,982.2	8.8	9.9	-63.26	186.8	-223.6	246.4	228.8	17.55	14.040	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,095.9	5,090.2	5,081.8	9.0	10.1	-64.85	190.8	-228.0	247.9	229.9	17.95	13.810	
5,200.0	5,195.4	5,189.9	5,181.4	9.2	10.3	-66.42	194.9	-232.4	249.5	231.2	18.35	13.598	
5,300.0	5,294.9	5,289.7	5,280.9	9.4	10.5	-67.96	198.9	-236.8	251.4	232.6	18.76	13.401	
5,400.0	5,394.5	5,389.4	5,380.5	9.6	10.8	-69.49	202.9	-241.2	253.4	234.3	19.17	13.219	
5,500.0	5,494.0	5,489.2	5,480.1	9.8	11.0	-70.99	207.0	-245.7	255.7	236.1	19.59	13.051	
5,600.0	5,593.5	5,588.9	5,579.7	10.0	11.2	-72.46	211.0	-250.1	258.1	238.0	20.01	12.896	
5,700.0	5,693.1	5,688.7	5,679.2	10.3	11.4	-73.90	215.0	-254.5	260.6	240.2	20.44	12.753	
5,800.0	5,792.6	5,788.4	5,778.8	10.5	11.6	-75.32	219.1	-258.9	263.3	242.5	20.86	12.622	
5,900.0	5,892.1	5,888.2	5,878.4	10.7	11.8	-76.70	223.1	-263.3	266.2	244.9	21.29	12.502	
6,000.0	5,991.7	5,987.9	5,978.0	10.9	12.0	-78.06	227.1	-267.7	269.3	247.5	21.73	12.392	
6,100.0	6,091.2	6,087.7	6,077.5	11.1	12.2	-79.38	231.2	-272.1	272.4	250.3	22.16	12.292	
6,200.0	6,190.7	6,187.4	6,177.1	11.3	12.4	-80.67	235.2	-276.5	275.8	253.2	22.60	12.201	
6,300.0	6,290.3	6,287.2	6,276.7	11.5	12.6	-81.94	239.2	-280.9	279.2	256.2	23.04	12.118	
6,400.0	6,389.8	6,386.9	6,376.2	11.8	12.8	-83.17	243.3	-285.3	282.8	259.3	23.48	12.043	
6,500.0	6,489.3	6,486.7	6,475.8	12.0	13.0	-84.36	247.3	-289.7	286.5	262.6	23.93	11.976	
6,600.0	6,588.9	6,587.5	6,576.5	12.2	13.2	-85.85	249.8	-294.2	290.3	265.9	24.36	11.917	
6,694.3	6,682.7	6,680.5	6,668.7	12.4	13.3	-89.68	239.3	-298.3	294.0	269.2	24.75	11.878	
6,700.0	6,688.4	6,685.9	6,673.9	12.4	13.3	-89.82	238.2	-298.5	294.2	269.5	24.77	11.878	
6,750.0	6,738.3	6,732.6	6,719.2	12.5	13.3	5.91	226.8	-300.5	297.0	272.1	24.93	11.913	
6,800.0	6,788.3	6,778.3	6,762.5	12.6	13.3	81.04	212.2	-302.4	300.4	275.3	25.04	11.997	
6,850.0	6,837.8	6,823.2	6,803.6	12.6	13.3	79.30	194.5	-304.2	304.2	279.1	25.09	12.126	
6,900.0	6,886.6	6,867.2	6,842.5	12.6	13.3	77.10	174.1	-306.0	308.5	283.4	25.09	12.295	
6,950.0	6,934.3	6,910.4	6,879.2	12.6	13.3	74.91	151.2	-307.6	313.0	288.0	25.04	12.499	
7,000.0	6,980.4	6,950.0	6,911.1	12.6	13.3	72.93	127.8	-309.0	317.7	292.8	24.96	12.732	
7,050.0	7,024.8	6,994.9	6,945.3	12.6	13.3	70.85	98.7	-310.5	322.5	297.7	24.83	12.989	
7,100.0	7,066.9	7,036.4	6,974.7	12.6	13.3	69.03	69.6	-311.8	327.3	302.6	24.68	13.260	
7,150.0	7,106.5	7,077.3	7,001.6	12.5	13.3	67.38	38.8	-313.0	331.9	307.4	24.52	13.537	
7,200.0	7,143.4	7,117.8	7,026.0	12.6	13.4	65.88	6.5	-314.1	336.4	312.0	24.41	13.781	
7,250.0	7,177.1	7,158.0	7,047.9	12.6	13.5	64.55	-27.2	-315.0	340.5	316.2	24.27	14.033	
7,300.0	7,207.5	7,200.0	7,068.2	12.7	13.6	63.33	-63.9	-315.9	344.3	320.1	24.19	14.234	
7,350.0	7,234.4	7,237.4	7,084.0	12.8	13.8	62.36	-97.8	-316.6	347.7	323.5	24.19	14.373	
7,400.0	7,257.4	7,276.7	7,098.2	13.0	14.0	61.50	-134.4	-317.3	350.6	326.3	24.27	14.442	
7,450.0	7,276.5	7,315.8	7,109.8	13.2	14.2	60.80	-171.8	-317.8	352.9	328.5	24.46	14.428	
7,500.0	7,291.6	7,350.0	7,117.8	13.5	14.4	60.29	-205.0	-318.1	354.8	330.1	24.74	14.339	
7,550.0	7,302.3	7,393.6	7,125.1	13.8	14.7	59.85	-248.0	-318.5	356.0	330.8	25.20	14.125	
7,600.0	7,308.8	7,432.3	7,128.9	14.2	15.0	59.60	-286.6	-318.6	356.6	330.9	25.77	13.838	
7,649.7	7,311.0	7,471.5	7,130.0	14.6	15.3	59.50	-325.7	-318.7	356.7	330.2	26.47	13.476	
7,700.0	7,311.0	7,521.7	7,130.0	15.1	15.7	59.47	-375.9	-318.7	356.3	329.0	27.28	13.061	
7,800.0	7,311.0	7,621.7	7,130.0	16.1	16.7	59.40	-475.9	-318.7	355.5	326.5	29.04	12.243	
7,900.0	7,311.0	7,721.7	7,130.0	17.3	17.8	59.32	-575.9	-318.7	354.8	323.8	30.99	11.447	
8,000.0	7,311.0	7,821.7	7,130.0	18.5	19.0	59.25	-675.9	-318.7	354.0	320.9	33.11	10.694	
8,100.0	7,311.0	7,921.7	7,130.0	19.8	20.3	59.18	-775.9	-318.7	353.3	317.9	35.34	9.996	
8,200.0	7,311.0	8,021.7	7,130.0	21.2	21.6	59.11	-875.9	-318.7	352.5	314.9	37.68	9.355	
8,300.0	7,311.0	8,121.7	7,130.0	22.6	23.1	59.03	-975.9	-318.7	351.8	311.7	40.11	8.771	
8,400.0	7,311.0	8,221.7	7,130.0	24.1	24.5	58.96	-1,075.9	-318.7	351.0	308.4	42.60	8.240	
8,500.0	7,311.0	8,321.7	7,130.0	25.6	26.0	58.89	-1,175.9	-318.7	350.3	305.1	45.15	7.758	
8,600.0	7,311.0	8,421.7	7,130.0	27.2	27.5	58.81	-1,275.9	-318.7	349.5	301.8	47.75	7.320	
8,700.0	7,311.0	8,521.7	7,130.0	28.7	29.0	58.74	-1,375.9	-318.7	348.8	298.4	50.39	6.923	
8,800.0	7,311.0	8,621.7	7,130.0	30.3	30.6	58.66	-1,475.9	-318.7	348.1	295.0	53.05	6.560	
8,900.0	7,311.0	8,721.7	7,130.0	31.9	32.2	58.59	-1,575.9	-318.7	347.3	291.6	55.75	6.230	
9,000.0	7,311.0	8,821.7	7,130.0	33.5	33.8	58.51	-1,675.9	-318.7	346.6	288.1	58.46	5.928	
9,100.0	7,311.0	8,921.7	7,130.0	35.2	35.4	58.44	-1,775.9	-318.7	345.8	284.6	61.20	5.651	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,200.0	7,311.0	9,021.7	7,130.0	36.8	37.1	58.36	-1,875.9	-318.7	345.1	281.1	63.95	5.396	
9,300.0	7,311.0	9,121.7	7,130.0	38.4	38.7	58.29	-1,975.9	-318.7	344.3	277.6	66.71	5.162	
9,400.0	7,311.0	9,221.7	7,130.0	40.1	40.3	58.21	-2,075.9	-318.7	343.6	274.1	69.48	4.945	
9,500.0	7,311.0	9,321.7	7,130.0	41.8	42.0	58.13	-2,175.9	-318.7	342.9	270.6	72.26	4.745	
9,600.0	7,311.0	9,421.7	7,130.0	43.5	43.7	58.06	-2,275.9	-318.7	342.1	267.1	75.05	4.559	
9,700.0	7,311.0	9,521.7	7,130.0	45.1	45.3	57.98	-2,375.9	-318.7	341.4	263.5	77.84	4.385	
9,800.0	7,311.0	9,621.7	7,130.0	46.8	47.0	57.90	-2,475.9	-318.7	340.6	260.0	80.64	4.224	
9,900.0	7,311.0	9,721.7	7,130.0	48.5	48.7	57.82	-2,575.9	-318.7	339.9	256.5	83.44	4.074	
10,000.0	7,311.0	9,821.7	7,130.0	50.2	50.4	57.74	-2,675.9	-318.7	339.2	252.9	86.24	3.933	
10,100.0	7,311.0	9,921.7	7,130.0	51.9	52.1	57.67	-2,775.9	-318.7	338.4	249.4	89.05	3.800	
10,200.0	7,311.0	10,021.7	7,130.0	53.6	53.8	57.59	-2,875.9	-318.7	337.7	245.8	91.85	3.676	
10,300.0	7,311.0	10,121.7	7,130.0	55.3	55.5	57.51	-2,975.8	-318.7	336.9	242.3	94.66	3.560	
10,400.0	7,311.0	10,221.6	7,130.0	57.0	57.2	57.43	-3,075.8	-318.7	336.2	238.7	97.47	3.450	
10,500.0	7,311.0	10,321.6	7,130.0	58.7	58.9	57.35	-3,175.8	-318.7	335.5	235.2	100.27	3.346	
10,600.0	7,311.0	10,421.6	7,130.0	60.5	60.6	57.27	-3,275.8	-318.7	334.7	231.7	103.07	3.248	
10,700.0	7,311.0	10,521.6	7,130.0	62.2	62.3	57.19	-3,375.8	-318.7	334.0	228.1	105.87	3.155	
10,800.0	7,311.0	10,621.6	7,130.0	63.9	64.0	57.10	-3,475.8	-318.7	333.3	224.6	108.67	3.067	
10,900.0	7,311.0	10,721.6	7,130.0	65.6	65.7	57.02	-3,575.8	-318.7	332.5	221.1	111.47	2.983	
11,000.0	7,311.0	10,821.6	7,130.0	67.3	67.5	56.94	-3,675.8	-318.7	331.8	217.5	114.27	2.904	
11,069.7	7,311.0	10,891.3	7,130.0	68.5	68.7	56.88	-3,745.5	-318.7	331.3	215.1	116.21	2.851	
11,100.0	7,311.0	10,921.6	7,130.0	69.1	69.2	56.87	-3,775.8	-318.7	331.1	214.1	117.05	2.829	
11,119.7	7,311.0	10,941.3	7,130.0	69.4	69.5	56.86	-3,795.5	-318.7	331.1	213.5	117.60	2.816	
11,196.4	7,311.0	11,018.0	7,130.0	70.7	70.8	56.91	-3,872.2	-318.7	331.5	211.7	119.82	2.767	
11,200.0	7,311.0	11,021.6	7,130.0	70.8	70.9	56.91	-3,875.8	-318.7	331.6	211.7	119.93	2.765	
11,300.0	7,311.0	11,121.6	7,130.0	72.5	72.6	57.04	-3,975.8	-318.7	332.7	209.7	122.99	2.705	
11,400.0	7,311.0	11,221.6	7,130.0	74.2	74.4	57.16	-4,075.8	-318.7	333.8	207.8	126.05	2.648	
11,500.0	7,311.0	11,321.6	7,130.0	76.0	76.1	57.29	-4,175.8	-318.7	335.0	205.8	129.13	2.594	
11,600.0	7,311.0	11,421.6	7,130.0	77.7	77.8	57.41	-4,275.8	-318.7	336.1	203.9	132.21	2.542	
11,700.0	7,311.0	11,521.6	7,130.0	79.4	79.5	57.53	-4,375.8	-318.7	337.2	201.9	135.30	2.492	
11,800.0	7,311.0	11,621.6	7,130.0	81.2	81.3	57.66	-4,475.8	-318.7	338.3	199.9	138.40	2.445	
11,900.0	7,311.0	11,721.6	7,130.0	82.9	83.0	57.78	-4,575.8	-318.7	339.5	198.0	141.51	2.399	
12,000.0	7,311.0	11,821.5	7,130.0	84.6	84.7	57.90	-4,675.7	-318.7	340.6	196.0	144.63	2.355	
12,100.0	7,311.0	11,921.5	7,130.0	86.4	86.5	58.02	-4,775.7	-318.7	341.7	194.0	147.75	2.313	
12,200.0	7,311.0	12,021.5	7,130.0	88.1	88.2	58.14	-4,875.7	-318.7	342.9	192.0	150.88	2.273	
12,300.0	7,311.0	12,121.5	7,130.0	89.8	89.9	58.25	-4,975.7	-318.7	344.0	190.0	154.02	2.234	
12,400.0	7,311.0	12,221.5	7,130.0	91.6	91.7	58.37	-5,075.7	-318.7	345.2	188.0	157.16	2.196	
12,500.0	7,311.0	12,321.5	7,130.0	93.3	93.4	58.49	-5,175.7	-318.7	346.3	186.0	160.31	2.160	
12,600.0	7,311.0	12,421.5	7,130.0	95.0	95.1	58.60	-5,275.7	-318.7	347.4	184.0	163.47	2.125	
12,700.0	7,311.0	12,521.5	7,130.0	96.8	96.9	58.72	-5,375.7	-318.7	348.6	182.0	166.63	2.092	
12,800.0	7,311.0	12,621.5	7,130.0	98.5	98.6	58.83	-5,475.7	-318.7	349.7	179.9	169.80	2.060	
12,900.0	7,311.0	12,721.5	7,130.0	100.3	100.3	58.94	-5,575.7	-318.7	350.9	177.9	172.98	2.028	
13,000.0	7,311.0	12,821.5	7,130.0	102.0	102.1	59.06	-5,675.7	-318.7	352.0	175.9	176.16	1.998	
13,100.0	7,311.0	12,921.4	7,130.0	103.7	103.8	59.17	-5,775.6	-318.7	353.2	173.8	179.35	1.969	
13,200.0	7,311.0	13,021.4	7,130.0	105.5	105.6	59.28	-5,875.6	-318.7	354.3	171.8	182.54	1.941	
13,300.0	7,311.0	13,121.4	7,130.0	107.2	107.3	59.39	-5,975.6	-318.7	355.5	169.7	185.74	1.914	
13,400.0	7,311.0	13,221.4	7,130.0	109.0	109.0	59.50	-6,075.6	-318.7	356.6	167.7	188.95	1.887	
13,500.0	7,311.0	13,321.4	7,130.0	110.7	110.8	59.61	-6,175.6	-318.7	357.8	165.6	192.16	1.862	
13,600.0	7,311.0	13,421.4	7,130.0	112.4	112.5	59.71	-6,275.6	-318.7	358.9	163.6	195.37	1.837	
13,700.0	7,311.0	13,521.4	7,130.0	114.2	114.3	59.82	-6,375.6	-318.7	360.1	161.5	198.59	1.813	
13,800.0	7,311.0	13,621.4	7,130.0	115.9	116.0	59.93	-6,475.6	-318.7	361.3	159.4	201.82	1.790	
13,900.0	7,311.0	13,721.4	7,130.0	117.7	117.7	60.04	-6,575.6	-318.7	362.4	157.4	205.05	1.767	
14,000.0	7,311.0	13,821.4	7,130.0	119.4	119.5	60.14	-6,675.6	-318.7	363.6	155.3	208.29	1.746	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,311.0	13,921.4	7,130.0	121.2	121.2	60.25	-6,775.6	-318.7	364.7	153.2	211.53	1.724	
14,200.0	7,311.0	14,021.3	7,130.0	122.9	123.0	60.35	-6,875.5	-318.7	365.9	151.1	214.77	1.704	
14,300.0	7,311.0	14,121.3	7,130.0	124.7	124.7	60.45	-6,975.5	-318.7	367.1	149.0	218.02	1.684	
14,400.0	7,311.0	14,221.3	7,130.0	126.4	126.5	60.56	-7,075.5	-318.7	368.2	146.9	221.28	1.664	
14,500.0	7,311.0	14,321.3	7,130.0	128.1	128.2	60.66	-7,175.5	-318.7	369.4	144.9	224.54	1.645	
14,600.0	7,311.0	14,421.3	7,130.0	129.9	130.0	60.76	-7,275.5	-318.7	370.6	142.8	227.80	1.627	
14,700.0	7,311.0	14,521.3	7,130.0	131.6	131.7	60.86	-7,375.5	-318.7	371.7	140.7	231.07	1.609	
14,800.0	7,311.0	14,621.3	7,130.0	133.4	133.4	60.96	-7,475.5	-318.7	372.9	138.6	234.34	1.591	
14,900.0	7,311.0	14,721.3	7,130.0	135.1	135.2	61.06	-7,575.5	-318.7	374.1	136.4	237.62	1.574	
15,000.0	7,311.0	14,821.3	7,130.0	136.9	136.9	61.16	-7,675.5	-318.7	375.2	134.3	240.90	1.558	
15,087.3	7,311.0	14,908.6	7,130.0	138.4	138.5	61.24	-7,762.8	-318.7	376.3	132.5	243.77	1.544	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	90.05	0.0	19.6	19.6				
100.0	100.0	101.0	101.0	0.1	0.1	90.05	0.0	19.6	19.6	19.3	0.25	79.492	
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.60	32.869	
300.0	300.0	301.0	301.0	0.5	0.5	90.05	0.0	19.6	19.6	18.6	0.94	20.718	
400.0	400.0	401.0	401.0	0.6	0.6	90.05	0.0	19.6	19.6	18.3	1.29	15.126	
466.3	466.3	467.3	467.3	0.8	0.8	90.05	0.0	19.6	19.6	18.0	1.52	12.829	CC
500.0	500.0	501.0	501.0	0.8	0.8	90.05	0.0	19.6	19.6	17.9	1.64	11.911	ES
600.0	600.0	600.7	600.7	1.0	1.0	89.18	0.3	20.4	20.4	18.4	1.99	10.245	
700.0	700.0	700.3	700.2	1.2	1.2	86.98	1.2	22.8	22.9	20.5	2.34	9.782	
800.0	800.0	799.8	799.6	1.3	1.4	84.22	2.7	26.9	27.1	24.4	2.69	10.073	
900.0	900.0	899.5	899.2	1.5	1.5	81.75	4.7	32.1	32.5	29.4	3.04	10.690	
1,000.0	1,000.0	999.4	998.9	1.7	1.7	79.97	6.6	37.3	37.9	34.6	3.39	11.203	
1,100.0	1,100.0	1,099.2	1,098.6	1.9	1.9	78.64	8.5	42.5	43.4	39.7	3.74	11.627	
1,200.0	1,200.0	1,199.1	1,198.3	2.0	2.1	77.61	10.5	47.7	48.9	44.9	4.08	11.984	
1,300.0	1,300.0	1,298.9	1,298.0	2.2	2.3	76.78	12.4	52.9	54.5	50.0	4.43	12.287	
1,400.0	1,400.0	1,398.7	1,397.7	2.4	2.5	76.11	14.4	58.2	60.0	55.2	4.78	12.548	
1,500.0	1,500.0	1,498.6	1,497.4	2.6	2.7	75.56	16.3	63.4	65.5	60.4	5.13	12.775	
1,600.0	1,600.0	1,598.4	1,597.1	2.7	2.9	75.09	18.3	68.6	71.1	65.6	5.48	12.975	
1,700.0	1,700.0	1,698.3	1,696.7	2.9	3.1	74.68	20.2	73.8	76.6	70.8	5.83	13.151	
1,800.0	1,800.0	1,798.1	1,796.4	3.1	3.3	74.33	22.2	79.0	82.2	76.0	6.18	13.307	
1,900.0	1,900.0	1,898.0	1,896.1	3.3	3.5	74.03	24.1	84.2	87.8	81.2	6.53	13.448	
2,000.0	2,000.0	1,997.8	1,995.8	3.4	3.7	73.76	26.1	89.5	93.3	86.4	6.87	13.574	
2,100.0	2,100.0	2,097.7	2,095.5	3.6	3.9	73.53	28.0	94.7	98.9	91.6	7.22	13.689	
2,200.0	2,200.0	2,197.5	2,195.2	3.8	4.1	73.31	29.9	99.9	104.4	96.9	7.57	13.793	
2,300.0	2,300.0	2,297.3	2,294.9	4.0	4.3	73.12	31.9	105.1	110.0	102.1	7.92	13.888	
2,400.0	2,400.0	2,397.2	2,394.6	4.1	4.5	72.95	33.8	110.3	115.6	107.3	8.27	13.975	
2,500.0	2,500.0	2,497.0	2,494.3	4.3	4.7	72.79	35.8	115.5	121.1	112.5	8.62	14.056	
2,600.0	2,600.0	2,596.9	2,593.9	4.5	4.9	72.65	37.7	120.7	126.7	117.7	8.97	14.130	
2,700.0	2,700.0	2,696.7	2,693.6	4.7	5.1	72.52	39.7	126.0	132.3	122.9	9.31	14.199	
2,800.0	2,800.0	2,796.6	2,793.3	4.8	5.3	72.40	41.6	131.2	137.8	128.2	9.66	14.262	
2,900.0	2,900.0	2,896.4	2,893.0	5.0	5.5	72.29	43.6	136.4	143.4	133.4	10.01	14.322	
3,000.0	3,000.0	2,996.3	2,992.7	5.2	5.7	72.19	45.5	141.6	149.0	138.6	10.36	14.377	
3,100.0	3,100.0	3,096.1	3,092.4	5.4	5.9	72.09	47.4	146.8	154.5	143.8	10.71	14.429	
3,200.0	3,200.0	3,195.9	3,192.1	5.5	6.1	72.00	49.4	152.0	160.1	149.0	11.06	14.478	
3,300.0	3,300.0	3,295.8	3,291.8	5.7	6.3	71.92	51.3	157.2	165.7	154.3	11.41	14.524	
3,400.0	3,400.0	3,395.6	3,391.5	5.9	6.5	71.84	53.3	162.5	171.2	159.5	11.76	14.567	
3,500.0	3,500.0	3,495.5	3,491.2	6.1	6.7	71.77	55.2	167.7	176.8	164.7	12.10	14.607	
3,600.0	3,600.0	3,595.3	3,590.8	6.2	6.9	71.70	57.2	172.9	182.4	169.9	12.45	14.645	
3,700.0	3,700.0	3,695.2	3,690.5	6.4	7.1	71.64	59.1	178.1	188.0	175.1	12.80	14.682	
3,800.0	3,800.0	3,795.0	3,790.2	6.6	7.3	71.58	61.1	183.3	193.5	180.4	13.15	14.716	
3,900.0	3,900.0	3,894.9	3,889.9	6.8	7.5	71.52	63.0	188.5	199.1	185.6	13.50	14.749	
4,000.0	4,000.0	3,994.7	3,989.6	6.9	7.7	71.47	65.0	193.7	204.7	190.8	13.85	14.780	
4,100.0	4,100.0	4,094.6	4,089.3	7.1	7.9	72.82	66.9	199.0	209.8	195.6	14.20	14.777	
4,200.0	4,199.9	4,194.4	4,189.0	7.3	8.1	73.84	68.8	204.2	214.1	199.5	14.55	14.713	
4,300.0	4,299.6	4,294.1	4,288.5	7.5	8.3	75.60	70.8	209.4	217.7	202.8	14.91	14.601	
4,321.5	4,321.0	4,315.5	4,309.9	7.5	8.3	76.07	71.2	210.5	218.4	203.4	14.98	14.572	
4,400.0	4,399.1	4,393.6	4,387.9	7.6	8.5	77.86	72.7	214.6	221.0	205.7	15.27	14.473	
4,500.0	4,498.7	4,493.2	4,487.3	7.8	8.7	80.08	74.7	219.8	224.7	209.1	15.64	14.365	
4,600.0	4,598.2	4,592.8	4,586.7	8.0	8.9	82.22	76.6	225.0	228.7	212.7	16.02	14.279	
4,700.0	4,697.7	4,692.3	4,686.1	8.2	9.1	84.29	78.5	230.2	233.0	216.6	16.40	14.210	
4,800.0	4,797.3	4,791.9	4,785.5	8.4	9.3	86.28	80.5	235.4	237.7	220.9	16.79	14.158	
4,900.0	4,896.8	4,891.4	4,884.9	8.6	9.5	88.20	82.4	240.6	242.5	225.4	17.18	14.120	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,996.3	4,991.0	4,984.3	8.8	9.7	90.03	84.4	245.8	247.7	230.1	17.57	14.096	
5,100.0	5,095.9	5,090.5	5,083.7	9.0	9.9	91.79	86.3	251.0	253.1	235.1	17.97	14.084	
5,200.0	5,195.4	5,190.1	5,183.1	9.2	10.0	93.48	88.2	256.2	258.7	240.4	18.37	14.083	
5,300.0	5,294.9	5,289.6	5,282.5	9.4	10.2	95.09	90.2	261.4	264.6	245.8	18.78	14.091	
5,400.0	5,394.5	5,389.2	5,381.9	9.6	10.4	96.63	92.1	266.6	270.6	251.4	19.18	14.108	
5,500.0	5,494.0	5,488.8	5,481.3	9.8	10.6	98.11	94.1	271.8	276.9	257.3	19.59	14.132	
5,600.0	5,593.5	5,588.3	5,580.7	10.0	10.8	99.52	96.0	277.0	283.3	263.3	20.00	14.163	
5,700.0	5,693.1	5,687.9	5,680.1	10.3	11.0	100.86	97.9	282.2	289.8	269.4	20.41	14.200	
5,800.0	5,792.6	5,787.4	5,779.5	10.5	11.2	102.15	99.9	287.4	296.6	275.7	20.82	14.242	
5,900.0	5,892.1	5,887.0	5,878.9	10.7	11.4	103.38	101.8	292.6	303.4	282.2	21.24	14.289	
6,000.0	5,991.7	5,986.5	5,978.3	10.9	11.6	104.55	103.8	297.8	310.4	288.8	21.65	14.339	
6,100.0	6,091.2	6,086.1	6,077.7	11.1	11.8	105.67	105.7	303.0	317.5	295.5	22.06	14.393	
6,200.0	6,190.7	6,185.7	6,177.1	11.3	12.0	106.75	107.6	308.2	324.8	302.3	22.48	14.451	
6,300.0	6,290.3	6,285.2	6,276.5	11.5	12.2	107.77	109.6	313.4	332.1	309.3	22.89	14.510	
6,400.0	6,389.8	6,384.8	6,375.9	11.8	12.4	108.75	111.5	318.6	339.6	316.3	23.30	14.573	
6,500.0	6,489.3	6,484.3	6,475.4	12.0	12.6	109.69	113.5	323.8	347.1	323.4	23.72	14.636	
6,600.0	6,588.9	6,578.7	6,569.5	12.2	12.8	110.60	114.9	328.7	355.0	330.8	24.11	14.720	
6,694.3	6,682.7	6,650.0	6,640.5	12.4	12.9	112.21	109.4	333.0	366.3	341.9	24.43	14.997	
6,700.0	6,688.4	6,655.9	6,646.4	12.4	13.0	112.66	108.5	333.4	367.2	342.7	24.45	15.017	
6,750.0	6,738.3	6,693.4	6,683.1	12.5	13.0	-146.99	101.7	335.9	374.8	350.2	24.60	15.235	
6,800.0	6,788.3	6,730.5	6,718.9	12.6	13.1	-67.53	92.6	338.5	382.4	357.7	24.69	15.486	
6,850.0	6,837.8	6,767.2	6,753.8	12.6	13.1	-65.25	81.3	341.3	389.9	365.1	24.72	15.769	
6,900.0	6,886.6	6,800.0	6,784.2	12.6	13.2	-63.79	69.4	343.9	397.2	372.5	24.70	16.079	
6,950.0	6,934.3	6,839.9	6,820.3	12.6	13.2	-62.56	52.5	347.2	404.1	379.5	24.62	16.414	
7,000.0	6,980.4	6,876.0	6,851.7	12.6	13.3	-61.62	35.1	350.2	410.8	386.3	24.49	16.771	
7,050.0	7,024.8	6,911.9	6,881.8	12.6	13.4	-60.87	16.0	353.3	417.0	392.6	24.34	17.128	
7,100.0	7,066.9	6,950.0	6,912.5	12.6	13.5	-60.31	-6.5	356.8	422.7	398.5	24.17	17.487	
7,150.0	7,106.5	6,983.3	6,938.0	12.5	13.6	-59.91	-27.7	359.8	427.9	403.9	24.01	17.824	
7,200.0	7,143.4	7,019.0	6,963.8	12.6	13.7	-59.68	-52.0	363.1	432.5	408.7	23.86	18.129	
7,250.0	7,177.1	7,050.0	6,985.1	12.6	13.8	-59.56	-74.4	366.0	436.6	412.9	23.74	18.390	
7,300.0	7,207.5	7,090.3	7,010.7	12.7	14.0	-59.69	-105.2	369.8	440.1	416.4	23.73	18.548	
7,350.0	7,234.4	7,126.0	7,031.6	12.8	14.1	-59.92	-134.0	373.2	443.0	419.2	23.80	18.616	
7,400.0	7,257.4	7,161.8	7,050.7	13.0	14.3	-60.29	-164.1	376.6	445.4	421.4	23.98	18.572	
7,450.0	7,276.5	7,200.0	7,069.0	13.2	14.6	-60.85	-197.4	380.2	447.2	422.9	24.31	18.395	
7,500.0	7,291.6	7,233.9	7,083.3	13.5	14.8	-61.46	-228.0	383.4	448.4	423.7	24.76	18.109	
7,550.0	7,302.3	7,270.3	7,096.6	13.8	15.1	-62.26	-261.7	386.8	449.2	423.8	25.37	17.703	
7,600.0	7,308.8	7,306.9	7,107.8	14.2	15.3	-63.19	-296.4	390.1	449.5	423.4	26.13	17.204	
7,649.7	7,311.0	7,343.6	7,116.8	14.6	15.7	-64.25	-331.8	393.4	449.4	422.4	27.01	16.637	
7,658.6	7,311.0	7,350.0	7,118.1	14.7	15.7	-64.44	-338.0	393.9	449.4	422.2	27.16	16.544	
7,700.0	7,311.0	7,381.4	7,123.6	15.1	16.0	-65.24	-368.9	396.7	449.8	422.0	27.89	16.128	
7,800.0	7,311.0	7,458.7	7,129.9	16.1	16.8	-66.33	-445.5	403.0	454.8	425.1	29.70	15.313	
7,900.0	7,311.0	7,556.0	7,130.0	17.3	17.9	-66.76	-542.6	410.7	462.8	431.0	31.83	14.538	
8,000.0	7,311.0	7,655.6	7,130.0	18.5	19.0	-67.18	-641.9	418.5	470.8	436.7	34.16	13.782	
8,100.0	7,311.0	7,755.2	7,130.0	19.8	20.3	-67.59	-741.2	426.3	478.9	442.2	36.65	13.066	
8,200.0	7,311.0	7,854.9	7,130.0	21.2	21.7	-67.98	-840.5	434.1	487.0	447.7	39.26	12.402	
8,300.0	7,311.0	7,962.1	7,130.0	22.6	23.2	-68.35	-947.5	441.7	494.4	452.3	42.09	11.744	
8,400.0	7,311.0	8,070.7	7,130.0	24.1	24.7	-68.63	-1,055.9	447.4	500.1	455.0	45.02	11.109	
8,500.0	7,311.0	8,179.5	7,130.0	25.6	26.3	-68.82	-1,164.6	451.1	504.0	456.0	48.00	10.500	
8,600.0	7,311.0	8,288.4	7,130.0	27.2	27.9	-68.92	-1,273.6	452.7	506.2	455.1	51.03	9.920	
8,700.0	7,311.0	8,390.8	7,130.0	28.7	29.5	-68.96	-1,375.9	452.7	507.0	453.0	53.99	9.391	
8,800.0	7,311.0	8,490.8	7,130.0	30.3	31.0	-69.00	-1,475.9	452.7	507.9	450.9	56.96	8.916	
8,900.0	7,311.0	8,590.8	7,130.0	31.9	32.6	-69.03	-1,575.9	452.7	508.7	448.7	59.97	8.483	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,311.0	8,690.8	7,130.0	33.5	34.2	-69.07	-1,675.9	452.7	509.5	446.5	63.00	8.087	
9,100.0	7,311.0	8,790.8	7,130.0	35.2	35.8	-69.10	-1,775.9	452.7	510.3	444.2	66.06	7.725	
9,200.0	7,311.0	8,890.8	7,130.0	36.8	37.4	-69.14	-1,875.9	452.7	511.1	442.0	69.14	7.392	
9,300.0	7,311.0	8,990.8	7,130.0	38.4	39.0	-69.17	-1,975.9	452.7	511.9	439.7	72.25	7.086	
9,400.0	7,311.0	9,090.8	7,130.0	40.1	40.7	-69.21	-2,075.9	452.7	512.7	437.4	75.37	6.803	
9,500.0	7,311.0	9,190.8	7,130.0	41.8	42.3	-69.24	-2,175.9	452.7	513.6	435.1	78.50	6.542	
9,600.0	7,311.0	9,290.7	7,130.0	43.5	44.0	-69.28	-2,275.9	452.7	514.4	432.7	81.66	6.299	
9,700.0	7,311.0	9,390.7	7,130.0	45.1	45.6	-69.31	-2,375.9	452.7	515.2	430.4	84.82	6.074	
9,800.0	7,311.0	9,490.7	7,130.0	46.8	47.3	-69.35	-2,475.9	452.7	516.0	428.0	87.99	5.864	
9,900.0	7,311.0	9,590.7	7,130.0	48.5	49.0	-69.38	-2,575.9	452.7	516.8	425.6	91.18	5.668	
10,000.0	7,311.0	9,690.7	7,130.0	50.2	50.6	-69.41	-2,675.9	452.7	517.6	423.3	94.37	5.485	
10,100.0	7,311.0	9,790.7	7,130.0	51.9	52.3	-69.45	-2,775.9	452.7	518.5	420.9	97.58	5.313	
10,200.0	7,311.0	9,890.7	7,130.0	53.6	54.0	-69.48	-2,875.9	452.7	519.3	418.5	100.79	5.152	
10,300.0	7,311.0	9,990.7	7,130.0	55.3	55.7	-69.52	-2,975.8	452.7	520.1	416.1	104.01	5.001	
10,400.0	7,311.0	10,090.7	7,130.0	57.0	57.4	-69.55	-3,075.8	452.7	520.9	413.7	107.23	4.858	
10,500.0	7,311.0	10,190.7	7,130.0	58.7	59.1	-69.58	-3,175.8	452.7	521.7	411.3	110.46	4.723	
10,600.0	7,311.0	10,290.7	7,130.0	60.5	60.8	-69.62	-3,275.8	452.7	522.5	408.8	113.70	4.596	
10,700.0	7,311.0	10,397.6	7,130.0	62.2	62.6	-69.63	-3,382.7	452.2	522.9	405.8	117.04	4.467	
10,800.0	7,311.0	10,503.2	7,130.0	63.9	64.4	-69.58	-3,488.3	449.8	521.6	401.3	120.32	4.335	
10,900.0	7,311.0	10,603.2	7,130.0	65.6	66.1	-69.51	-3,588.2	447.3	520.1	396.6	123.50	4.211	
11,000.0	7,311.0	10,703.1	7,130.0	67.3	67.8	-69.45	-3,688.2	444.8	518.5	391.8	126.67	4.093	
11,069.7	7,311.0	10,772.8	7,130.0	68.5	69.0	-69.40	-3,757.9	443.0	517.4	388.5	128.89	4.014	
11,100.0	7,311.0	10,803.1	7,130.0	69.1	69.6	-69.38	-3,788.1	442.2	516.9	387.0	129.88	3.979	
11,196.4	7,311.0	10,899.5	7,130.0	70.7	71.2	-69.25	-3,884.5	439.8	514.1	381.1	132.98	3.866	
11,200.0	7,311.0	10,903.1	7,130.0	70.8	71.3	-69.25	-3,888.0	439.7	514.0	380.9	133.09	3.862	
11,300.0	7,311.0	11,003.0	7,130.0	72.5	73.0	-69.09	-3,987.9	437.1	510.4	374.2	136.19	3.747	
11,400.0	7,311.0	11,102.9	7,130.0	74.2	74.7	-68.94	-4,087.8	434.6	506.7	367.5	139.28	3.638	
11,500.0	7,311.0	11,202.9	7,130.0	76.0	76.4	-68.78	-4,187.7	432.0	503.1	360.7	142.36	3.534	
11,600.0	7,311.0	11,302.8	7,130.0	77.7	78.1	-68.62	-4,287.6	429.5	499.5	354.1	145.44	3.434	
11,700.0	7,311.0	11,402.7	7,130.0	79.4	79.9	-68.45	-4,387.5	427.0	495.9	347.4	148.51	3.339	
11,800.0	7,311.0	11,502.6	7,130.0	81.2	81.6	-68.29	-4,487.4	424.4	492.3	340.7	151.57	3.248	
11,900.0	7,311.0	11,602.6	7,130.0	82.9	83.3	-68.12	-4,587.3	421.9	488.7	334.0	154.62	3.160	
12,000.0	7,311.0	11,702.5	7,130.0	84.6	85.0	-67.95	-4,687.2	419.3	485.1	327.4	157.66	3.077	
12,100.0	7,311.0	11,802.4	7,130.0	86.4	86.8	-67.77	-4,787.1	416.8	481.5	320.8	160.69	2.996	
12,200.0	7,311.0	11,902.3	7,130.0	88.1	88.5	-67.60	-4,887.0	414.2	477.9	314.2	163.71	2.919	
12,300.0	7,311.0	12,002.2	7,130.0	89.8	90.2	-67.42	-4,986.9	411.7	474.3	307.6	166.71	2.845	
12,400.0	7,311.0	12,102.2	7,130.0	91.6	91.9	-67.24	-5,086.8	409.2	470.7	301.0	169.71	2.774	
12,500.0	7,311.0	12,202.1	7,130.0	93.3	93.7	-67.05	-5,186.6	406.6	467.1	294.4	172.69	2.705	
12,600.0	7,311.0	12,302.0	7,130.0	95.0	95.4	-66.87	-5,286.5	404.1	463.6	287.9	175.66	2.639	
12,700.0	7,311.0	12,401.9	7,130.0	96.8	97.1	-66.68	-5,386.4	401.5	460.0	281.4	178.62	2.575	
12,800.0	7,311.0	12,501.9	7,130.0	98.5	98.9	-66.48	-5,486.3	399.0	456.4	274.9	181.57	2.514	
12,900.0	7,311.0	12,601.8	7,130.0	100.3	100.6	-66.29	-5,586.2	396.4	452.9	268.4	184.50	2.455	
13,000.0	7,311.0	12,701.7	7,130.0	102.0	102.3	-66.09	-5,686.1	393.9	449.3	261.9	187.41	2.397	
13,100.0	7,311.0	12,801.6	7,130.0	103.7	104.1	-65.89	-5,786.0	391.4	445.8	255.5	190.31	2.342	
13,200.0	7,311.0	12,901.6	7,130.0	105.5	105.8	-65.68	-5,885.9	388.8	442.2	249.0	193.19	2.289	
13,300.0	7,311.0	13,001.5	7,130.0	107.2	107.5	-65.47	-5,985.8	386.3	438.7	242.6	196.06	2.238	
13,400.0	7,311.0	13,101.4	7,130.0	109.0	109.3	-65.26	-6,085.7	383.7	435.2	236.3	198.91	2.188	
13,500.0	7,311.0	13,201.3	7,130.0	110.7	111.0	-65.04	-6,185.6	381.2	431.6	229.9	201.74	2.140	
13,600.0	7,311.0	13,301.3	7,130.0	112.4	112.7	-64.83	-6,285.5	378.7	428.1	223.6	204.55	2.093	
13,700.0	7,311.0	13,401.2	7,130.0	114.2	114.5	-64.60	-6,385.4	376.1	424.6	217.3	207.34	2.048	
13,800.0	7,311.0	13,501.1	7,130.0	115.9	116.2	-64.38	-6,485.2	373.6	421.1	211.0	210.12	2.004	
13,900.0	7,311.0	13,601.0	7,130.0	117.7	118.0	-64.15	-6,585.1	371.0	417.6	204.7	212.87	1.962	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,000.0	7,311.0	13,701.0	7,130.0	119.4	119.7	-63.91	-6,685.0	368.5	414.1	198.5	215.60	1.921	
14,100.0	7,311.0	13,800.9	7,130.0	121.2	121.4	-63.67	-6,784.9	365.9	410.6	192.3	218.31	1.881	
14,200.0	7,311.0	13,900.8	7,130.0	122.9	123.2	-63.43	-6,884.8	363.4	407.2	186.2	220.99	1.842	
14,300.0	7,311.0	14,000.7	7,130.0	124.7	124.9	-63.18	-6,984.7	360.9	403.7	180.0	223.65	1.805	
14,400.0	7,311.0	14,100.7	7,130.0	126.4	126.7	-62.93	-7,084.6	358.3	400.2	173.9	226.29	1.769	
14,500.0	7,311.0	14,200.6	7,130.0	128.1	128.4	-62.68	-7,184.5	355.8	396.8	167.9	228.90	1.733	
14,600.0	7,311.0	14,300.5	7,130.0	129.9	130.1	-62.42	-7,284.4	353.2	393.3	161.8	231.48	1.699	
14,700.0	7,311.0	14,400.4	7,130.0	131.6	131.9	-62.16	-7,384.3	350.7	389.9	155.9	234.04	1.666	
14,800.0	7,311.0	14,500.4	7,130.0	133.4	133.6	-61.89	-7,484.2	348.1	386.5	149.9	236.56	1.634	
14,900.0	7,311.0	14,600.3	7,130.0	135.1	135.4	-61.61	-7,584.1	345.6	383.0	144.0	239.06	1.602	
15,000.0	7,311.0	14,700.2	7,130.0	136.9	137.1	-61.33	-7,684.0	343.1	379.6	138.1	241.52	1.572	
15,087.3	7,311.0	14,779.1	7,130.0	138.4	138.5	-61.11	-7,762.8	341.1	376.7	133.2	243.57	1.547	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	90.05	0.0	39.1	39.1				
100.0	100.0	101.0	101.0	0.1	0.1	90.05	0.0	39.1	39.1	38.9	0.25	158.985	
166.3	166.3	167.3	167.3	0.2	0.2	90.05	0.0	39.1	39.1	38.6	0.48	81.915	CC
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	39.1	39.1	38.5	0.60	65.740	ES
300.0	300.0	300.4	300.4	0.5	0.5	89.55	0.3	39.9	39.9	39.0	0.94	42.340	
400.0	400.0	400.0	400.0	0.6	0.7	88.17	1.4	42.3	42.4	41.1	1.29	32.776	
500.0	500.0	498.9	498.7	0.8	0.8	86.22	3.1	46.3	46.4	44.8	1.64	28.295	
600.0	600.0	597.9	597.5	1.0	1.0	84.00	5.4	51.8	52.2	50.2	1.99	26.224	
700.0	700.0	696.6	696.0	1.2	1.2	81.79	8.5	58.9	59.7	57.4	2.34	25.513	
800.0	800.0	795.3	794.3	1.3	1.5	79.74	12.2	67.5	68.9	66.2	2.69	25.627	
900.0	900.0	894.8	893.3	1.5	1.7	78.09	16.2	76.6	78.7	75.7	3.04	25.912	
1,000.0	1,000.0	994.3	992.2	1.7	1.9	76.80	20.1	85.8	88.6	85.2	3.39	26.157	
1,100.0	1,100.0	1,093.8	1,091.2	1.9	2.2	75.77	24.1	95.0	98.5	94.7	3.73	26.368	
1,200.0	1,200.0	1,193.3	1,190.2	2.0	2.4	74.92	28.1	104.1	108.4	104.3	4.08	26.551	
1,300.0	1,300.0	1,292.8	1,289.2	2.2	2.7	74.22	32.0	113.3	118.3	113.9	4.43	26.710	
1,400.0	1,400.0	1,392.3	1,388.2	2.4	2.9	73.63	36.0	122.5	128.3	123.5	4.78	26.850	
1,500.0	1,500.0	1,491.8	1,487.2	2.6	3.2	73.12	39.9	131.7	138.3	133.1	5.13	26.973	
1,600.0	1,600.0	1,591.3	1,586.2	2.7	3.4	72.69	43.9	140.8	148.3	142.8	5.47	27.083	
1,700.0	1,700.0	1,690.8	1,685.2	2.9	3.6	72.30	47.9	150.0	158.2	152.4	5.82	27.180	
1,800.0	1,800.0	1,790.3	1,784.2	3.1	3.9	71.97	51.8	159.2	168.2	162.1	6.17	27.268	
1,900.0	1,900.0	1,889.8	1,883.2	3.3	4.1	71.67	55.8	168.3	178.2	171.7	6.52	27.348	
2,000.0	2,000.0	1,989.3	1,982.2	3.4	4.4	71.40	59.7	177.5	188.2	181.4	6.87	27.420	
2,100.0	2,100.0	2,088.8	2,081.2	3.6	4.6	71.16	63.7	186.7	198.3	191.0	7.21	27.485	
2,200.0	2,200.0	2,188.3	2,180.1	3.8	4.9	70.94	67.7	195.9	208.3	200.7	7.56	27.545	
2,300.0	2,300.0	2,287.7	2,279.1	4.0	5.1	70.74	71.6	205.0	218.3	210.4	7.91	27.601	
2,400.0	2,400.0	2,387.2	2,378.1	4.1	5.4	70.56	75.6	214.2	228.3	220.0	8.26	27.651	
2,500.0	2,500.0	2,486.7	2,477.1	4.3	5.6	70.40	79.6	223.4	238.3	229.7	8.60	27.698	
2,600.0	2,600.0	2,586.2	2,576.1	4.5	5.8	70.24	83.5	232.5	248.3	239.4	8.95	27.742	
2,700.0	2,700.0	2,685.7	2,675.1	4.7	6.1	70.10	87.5	241.7	258.4	249.1	9.30	27.782	
2,800.0	2,800.0	2,785.2	2,774.1	4.8	6.3	69.97	91.4	250.9	268.4	258.7	9.65	27.819	
2,900.0	2,900.0	2,884.7	2,873.1	5.0	6.6	69.85	95.4	260.1	278.4	268.4	9.99	27.854	
3,000.0	3,000.0	2,984.2	2,972.1	5.2	6.8	69.74	99.4	269.2	288.4	278.1	10.34	27.887	
3,100.0	3,100.0	3,083.7	3,071.1	5.4	7.1	69.64	103.3	278.4	298.5	287.8	10.69	27.918	
3,200.0	3,200.0	3,183.2	3,170.1	5.5	7.3	69.54	107.3	287.6	308.5	297.4	11.04	27.947	
3,300.0	3,300.0	3,282.7	3,269.1	5.7	7.6	69.45	111.2	296.7	318.5	307.1	11.39	27.974	
3,400.0	3,400.0	3,382.2	3,368.0	5.9	7.8	69.36	115.2	305.9	328.5	316.8	11.73	28.000	
3,500.0	3,500.0	3,481.7	3,467.0	6.1	8.1	69.28	119.2	315.1	338.6	326.5	12.08	28.024	
3,600.0	3,600.0	3,581.2	3,566.0	6.2	8.3	69.21	123.1	324.3	348.6	336.2	12.43	28.047	
3,700.0	3,700.0	3,680.7	3,665.0	6.4	8.6	69.13	127.1	333.4	358.6	345.9	12.78	28.069	
3,800.0	3,800.0	3,780.2	3,764.0	6.6	8.8	69.07	131.1	342.6	368.7	355.5	13.12	28.089	
3,900.0	3,900.0	3,879.7	3,863.0	6.8	9.0	69.00	135.0	351.8	378.7	365.2	13.47	28.109	
4,000.0	4,000.0	3,979.2	3,962.0	6.9	9.3	68.94	139.0	360.9	388.7	374.9	13.82	28.127	
4,100.0	4,100.0	4,078.7	4,061.0	7.1	9.5	70.03	142.9	370.1	398.3	384.1	14.17	28.111	
4,200.0	4,199.9	4,178.3	4,160.1	7.3	9.8	70.43	146.9	379.3	406.8	392.2	14.52	28.012	
4,300.0	4,299.6	4,277.8	4,259.1	7.5	10.0	71.21	150.9	388.5	414.4	399.5	14.88	27.845	
4,321.5	4,321.0	4,299.2	4,280.4	7.5	10.1	71.43	151.7	390.4	415.9	400.9	14.96	27.801	
4,400.0	4,399.1	4,377.2	4,358.0	7.6	10.3	72.33	154.8	397.6	421.4	406.2	15.25	27.641	
4,500.0	4,498.7	4,476.5	4,456.9	7.8	10.5	73.45	158.8	406.8	428.6	413.0	15.62	27.445	
4,600.0	4,598.2	4,575.9	4,555.8	8.0	10.8	74.52	162.7	415.9	436.0	420.0	15.99	27.259	
4,700.0	4,697.7	4,675.3	4,654.7	8.2	11.0	75.57	166.7	425.1	443.5	427.1	16.37	27.082	
4,800.0	4,797.3	4,774.7	4,753.6	8.4	11.3	76.57	170.7	434.3	451.1	434.3	16.76	26.914	
4,900.0	4,896.8	4,874.1	4,852.5	8.6	11.5	77.55	174.6	443.4	458.9	441.7	17.15	26.753	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,996.3	4,973.5	4,951.4	8.8	11.8	78.49	178.6	452.6	466.8	449.2	17.55	26.600	
5,100.0	5,095.9	5,072.9	5,050.2	9.0	12.0	79.40	182.5	461.8	474.8	456.9	17.95	26.455	
5,200.0	5,195.4	5,172.3	5,149.1	9.2	12.2	80.28	186.5	470.9	482.9	464.6	18.35	26.316	
5,300.0	5,294.9	5,271.7	5,248.0	9.4	12.5	81.13	190.4	480.1	491.2	472.4	18.76	26.184	
5,400.0	5,394.5	5,371.1	5,346.9	9.6	12.7	81.95	194.4	489.2	499.5	480.4	19.17	26.058	
5,500.0	5,494.0	5,470.5	5,445.8	9.8	13.0	82.74	198.4	498.4	508.0	488.4	19.58	25.939	
5,600.0	5,593.5	5,569.9	5,544.7	10.0	13.2	83.51	202.3	507.6	516.6	496.6	20.00	25.825	
5,700.0	5,693.1	5,669.3	5,643.6	10.3	13.5	84.25	206.3	516.7	525.2	504.8	20.42	25.716	
5,800.0	5,792.6	5,768.7	5,742.5	10.5	13.7	84.97	210.2	525.9	533.9	513.1	20.85	25.613	
5,900.0	5,892.1	5,868.1	5,841.4	10.7	14.0	85.67	214.2	535.1	542.7	521.5	21.27	25.515	
6,000.0	5,991.7	5,967.5	5,940.3	10.9	14.2	86.35	218.2	544.2	551.6	529.9	21.70	25.422	
6,100.0	6,091.2	6,066.9	6,039.2	11.1	14.5	87.00	222.1	553.4	560.6	538.4	22.13	25.333	
6,200.0	6,190.7	6,166.3	6,138.1	11.3	14.7	87.63	226.1	562.5	569.6	547.0	22.56	25.248	
6,300.0	6,290.3	6,265.7	6,237.0	11.5	15.0	88.24	230.0	571.7	578.7	555.7	22.99	25.168	
6,400.0	6,389.8	6,365.1	6,335.9	11.8	15.2	88.84	234.0	580.9	587.8	564.4	23.43	25.091	
6,500.0	6,489.3	6,464.5	6,434.8	12.0	15.4	89.41	237.9	590.0	597.1	573.2	23.86	25.018	
6,600.0	6,588.9	6,563.9	6,533.7	12.2	15.7	89.97	241.9	599.2	606.3	582.0	24.30	24.949	
6,694.3	6,682.7	6,657.7	6,627.0	12.4	15.9	90.48	245.6	607.8	615.1	590.4	24.72	24.887	
6,700.0	6,688.4	6,663.3	6,632.6	12.4	15.9	90.74	245.9	608.3	615.7	590.9	24.74	24.881	
6,750.0	6,738.3	6,713.0	6,682.1	12.5	16.1	-170.19	247.8	612.9	620.4	595.4	24.95	24.867	
6,800.0	6,788.3	6,762.6	6,731.4	12.6	16.2	-92.22	249.8	617.5	625.2	600.1	25.10	24.904	
6,850.0	6,837.8	6,812.4	6,781.0	12.6	16.3	-91.53	250.6	622.1	630.0	604.8	25.20	25.001	
6,900.0	6,886.6	6,863.1	6,831.3	12.6	16.4	-91.43	247.2	626.8	634.9	609.7	25.25	25.149	
6,950.0	6,934.3	6,914.4	6,881.7	12.6	16.5	-91.47	239.2	631.4	639.9	614.6	25.26	25.334	
7,000.0	6,980.4	6,966.4	6,931.9	12.6	16.5	-91.55	226.5	636.1	644.8	619.5	25.24	25.548	
7,050.0	7,024.8	7,019.2	6,981.5	12.6	16.5	-91.66	209.0	640.7	649.6	624.4	25.20	25.777	
7,100.0	7,066.9	7,072.8	7,029.9	12.6	16.6	-91.78	186.6	645.2	654.3	629.1	25.16	26.004	
7,150.0	7,106.5	7,127.1	7,076.7	12.5	16.6	-91.89	159.3	649.5	658.8	633.7	25.14	26.210	
7,200.0	7,143.4	7,182.2	7,121.3	12.6	16.6	-91.99	127.3	653.6	663.1	638.0	25.14	26.375	
7,250.0	7,177.1	7,238.0	7,163.1	12.6	16.7	-92.08	90.6	657.5	667.2	642.0	25.20	26.474	
7,300.0	7,207.5	7,294.4	7,201.7	12.7	16.8	-92.16	49.5	661.1	671.0	645.6	25.33	26.488	
7,350.0	7,234.4	7,351.6	7,236.4	12.8	16.9	-92.23	4.3	664.3	674.4	648.8	25.55	26.396	
7,400.0	7,257.4	7,409.3	7,266.7	13.0	17.0	-92.27	-44.7	667.1	677.4	651.5	25.87	26.180	
7,450.0	7,276.5	7,467.5	7,292.1	13.2	17.2	-92.29	-97.0	669.5	680.0	653.6	26.31	25.841	
7,500.0	7,291.6	7,526.1	7,312.3	13.5	17.4	-92.30	-152.0	671.3	682.1	655.2	26.87	25.382	
7,550.0	7,302.3	7,585.0	7,326.8	13.8	17.7	-92.28	-209.1	672.7	683.8	656.2	27.55	24.816	
7,600.0	7,308.8	7,644.2	7,335.4	14.2	18.1	-92.24	-267.5	673.5	684.9	656.6	28.35	24.162	
7,649.7	7,311.0	7,702.4	7,338.0	14.6	18.5	-92.17	-325.7	673.7	685.6	656.3	29.23	23.450	
7,700.0	7,311.0	7,752.7	7,338.0	15.1	18.8	-92.17	-375.9	673.7	686.0	655.8	30.17	22.735	
7,800.0	7,311.0	7,852.7	7,338.0	16.1	19.7	-92.17	-475.9	673.7	686.9	654.7	32.21	21.323	
7,900.0	7,311.0	7,952.7	7,338.0	17.3	20.6	-92.17	-575.9	673.7	687.7	653.2	34.49	19.941	
8,000.0	7,311.0	8,052.7	7,338.0	18.5	21.7	-92.16	-675.9	673.7	688.6	651.7	36.96	18.632	
8,100.0	7,311.0	8,152.7	7,338.0	19.8	22.8	-92.16	-775.9	673.7	689.5	649.9	39.58	17.418	
8,200.0	7,311.0	8,252.6	7,338.0	21.2	24.0	-92.16	-875.9	673.7	690.4	648.0	42.34	16.306	
8,300.0	7,311.0	8,352.6	7,338.0	22.6	25.3	-92.16	-975.9	673.7	691.2	646.0	45.20	15.294	
8,400.0	7,311.0	8,452.6	7,338.0	24.1	26.6	-92.15	-1,075.9	673.7	692.1	644.0	48.14	14.377	
8,500.0	7,311.0	8,552.6	7,338.0	25.6	28.0	-92.15	-1,175.9	673.7	693.0	641.8	51.16	13.546	
8,600.0	7,311.0	8,652.6	7,338.0	27.2	29.4	-92.15	-1,275.9	673.7	693.8	639.6	54.23	12.794	
8,700.0	7,311.0	8,752.6	7,338.0	28.7	30.9	-92.14	-1,375.9	673.7	694.7	637.4	57.35	12.113	
8,800.0	7,311.0	8,852.6	7,338.0	30.3	32.3	-92.14	-1,475.9	673.7	695.6	635.1	60.52	11.494	
8,900.0	7,311.0	8,952.6	7,338.0	31.9	33.8	-92.14	-1,575.9	673.7	696.5	632.7	63.72	10.930	
9,000.0	7,311.0	9,052.6	7,338.0	33.5	35.4	-92.14	-1,675.9	673.7	697.3	630.4	66.95	10.415	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,100.0	7,311.0	9,152.6	7,338.0	35.2	36.9	-92.13	-1,775.9	673.7	698.2	628.0	70.21	9.944	
9,200.0	7,311.0	9,252.6	7,338.0	36.8	38.5	-92.13	-1,875.9	673.7	699.1	625.6	73.49	9.512	
9,300.0	7,311.0	9,352.6	7,338.0	38.4	40.1	-92.13	-1,975.9	673.7	699.9	623.2	76.79	9.115	
9,400.0	7,311.0	9,452.6	7,338.0	40.1	41.7	-92.13	-2,075.9	673.7	700.8	620.7	80.11	8.748	
9,500.0	7,311.0	9,552.6	7,338.0	41.8	43.3	-92.12	-2,175.9	673.7	701.7	618.2	83.44	8.409	
9,600.0	7,311.0	9,652.6	7,338.0	43.5	44.9	-92.12	-2,275.9	673.7	702.6	615.8	86.79	8.095	
9,700.0	7,311.0	9,752.6	7,338.0	45.1	46.5	-92.12	-2,375.9	673.7	703.4	613.3	90.15	7.803	
9,800.0	7,311.0	9,852.6	7,338.0	46.8	48.2	-92.12	-2,475.9	673.7	704.3	610.8	93.52	7.531	
9,900.0	7,311.0	9,952.6	7,338.0	48.5	49.8	-92.11	-2,575.9	673.7	705.2	608.3	96.90	7.277	
10,000.0	7,311.0	10,052.6	7,338.0	50.2	51.5	-92.11	-2,675.9	673.7	706.1	605.8	100.29	7.040	
10,100.0	7,311.0	10,152.6	7,338.0	51.9	53.1	-92.11	-2,775.9	673.7	706.9	603.2	103.68	6.818	
10,200.0	7,311.0	10,252.6	7,338.0	53.6	54.8	-92.11	-2,875.8	673.7	707.8	600.7	107.09	6.609	
10,300.0	7,311.0	10,352.6	7,338.0	55.3	56.5	-92.10	-2,975.8	673.7	708.7	598.2	110.50	6.413	
10,400.0	7,311.0	10,452.6	7,338.0	57.0	58.1	-92.10	-3,075.8	673.7	709.5	595.6	113.91	6.229	
10,500.0	7,311.0	10,552.6	7,338.0	58.7	59.8	-92.10	-3,175.8	673.7	710.4	593.1	117.33	6.055	
10,600.0	7,311.0	10,652.6	7,338.0	60.5	61.5	-92.09	-3,275.8	673.7	711.3	590.5	120.76	5.890	
10,700.0	7,311.0	10,752.6	7,338.0	62.2	63.2	-92.09	-3,375.8	673.7	712.2	588.0	124.19	5.734	
10,800.0	7,311.0	10,852.5	7,338.0	63.9	64.9	-92.09	-3,475.8	673.7	713.0	585.4	127.62	5.587	
10,900.0	7,311.0	10,952.5	7,338.0	65.6	66.6	-92.09	-3,575.8	673.7	713.9	582.8	131.06	5.447	
11,000.0	7,311.0	11,052.5	7,338.0	67.3	68.3	-92.08	-3,675.8	673.7	714.8	580.3	134.50	5.314	
11,069.7	7,311.0	11,122.3	7,338.0	68.5	69.5	-92.08	-3,745.5	673.7	715.4	578.5	136.91	5.225	
11,100.0	7,311.0	11,152.5	7,338.0	69.1	70.0	-92.08	-3,775.8	673.7	715.6	577.6	138.01	5.185	
11,196.4	7,311.0	11,249.0	7,338.0	70.7	71.6	-92.08	-3,872.2	673.7	715.1	573.6	141.49	5.054	
11,200.0	7,311.0	11,252.5	7,338.0	70.8	71.7	-92.08	-3,875.8	673.7	715.0	573.4	141.61	5.049	
11,300.0	7,311.0	11,352.5	7,338.0	72.5	73.4	-92.09	-3,975.8	673.7	713.7	568.6	145.06	4.920	
11,400.0	7,311.0	11,452.5	7,338.0	74.2	75.1	-92.09	-4,075.8	673.7	712.4	563.8	148.52	4.797	
11,500.0	7,311.0	11,552.5	7,338.0	76.0	76.8	-92.10	-4,175.8	673.7	711.0	559.1	151.97	4.679	
11,600.0	7,311.0	11,652.5	7,338.0	77.7	78.5	-92.10	-4,275.8	673.7	709.7	554.3	155.43	4.566	
11,700.0	7,311.0	11,752.5	7,338.0	79.4	80.2	-92.10	-4,375.8	673.7	708.4	549.5	158.89	4.458	
11,800.0	7,311.0	11,852.5	7,338.0	81.2	81.9	-92.11	-4,475.8	673.7	707.0	544.7	162.35	4.355	
11,900.0	7,311.0	11,952.5	7,338.0	82.9	83.7	-92.11	-4,575.8	673.7	705.7	539.9	165.81	4.256	
12,000.0	7,311.0	12,052.5	7,338.0	84.6	85.4	-92.12	-4,675.7	673.7	704.3	535.1	169.28	4.161	
12,100.0	7,311.0	12,152.5	7,338.0	86.4	87.1	-92.12	-4,775.7	673.7	703.0	530.3	172.75	4.070	
12,200.0	7,311.0	12,252.4	7,338.0	88.1	88.8	-92.12	-4,875.7	673.7	701.7	525.5	176.21	3.982	
12,300.0	7,311.0	12,352.4	7,338.0	89.8	90.5	-92.13	-4,975.7	673.7	700.3	520.6	179.68	3.898	
12,400.0	7,311.0	12,452.4	7,338.0	91.6	92.3	-92.13	-5,075.7	673.7	699.0	515.8	183.15	3.816	
12,500.0	7,311.0	12,552.4	7,338.0	93.3	94.0	-92.14	-5,175.7	673.7	697.7	511.0	186.63	3.738	
12,600.0	7,311.0	12,652.4	7,338.0	95.0	95.7	-92.14	-5,275.7	673.7	696.3	506.2	190.10	3.663	
12,700.0	7,311.0	12,752.4	7,338.0	96.8	97.4	-92.14	-5,375.7	673.7	695.0	501.4	193.57	3.590	
12,800.0	7,311.0	12,852.4	7,338.0	98.5	99.2	-92.15	-5,475.7	673.7	693.6	496.6	197.05	3.520	
12,900.0	7,311.0	12,952.4	7,338.0	100.3	100.9	-92.15	-5,575.7	673.7	692.3	491.8	200.53	3.452	
13,000.0	7,311.0	13,052.4	7,338.0	102.0	102.6	-92.16	-5,675.7	673.7	691.0	487.0	204.00	3.387	
13,100.0	7,311.0	13,152.4	7,338.0	103.7	104.4	-92.16	-5,775.6	673.7	689.6	482.1	207.48	3.324	
13,200.0	7,311.0	13,252.4	7,338.0	105.5	106.1	-92.17	-5,875.6	673.7	688.3	477.3	210.96	3.263	
13,300.0	7,311.0	13,352.3	7,338.0	107.2	107.8	-92.17	-5,975.6	673.7	687.0	472.5	214.44	3.203	
13,400.0	7,311.0	13,452.3	7,338.0	109.0	109.6	-92.17	-6,075.6	673.7	685.6	467.7	217.92	3.146	
13,500.0	7,311.0	13,552.3	7,338.0	110.7	111.3	-92.18	-6,175.6	673.7	684.3	462.9	221.40	3.091	
13,600.0	7,311.0	13,652.3	7,338.0	112.4	113.0	-92.18	-6,275.6	673.7	682.9	458.1	224.88	3.037	
13,700.0	7,311.0	13,752.3	7,338.0	114.2	114.8	-92.19	-6,375.6	673.7	681.6	453.2	228.37	2.985	
13,800.0	7,311.0	13,852.3	7,338.0	115.9	116.5	-92.19	-6,475.6	673.7	680.3	448.4	231.85	2.934	
13,900.0	7,311.0	13,952.3	7,338.0	117.7	118.2	-92.19	-6,575.6	673.7	678.9	443.6	235.34	2.885	
14,000.0	7,311.0	14,052.3	7,338.0	119.4	120.0	-92.20	-6,675.6	673.7	677.6	438.8	238.82	2.837	

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 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,100.0	7,311.0	14,152.3	7,338.0	121.2	121.7	-92.20	-6,775.6	673.7	676.3	433.9	242.31	2.791	
14,200.0	7,311.0	14,252.3	7,338.0	122.9	123.4	-92.21	-6,875.5	673.7	674.9	429.1	245.79	2.746	
14,300.0	7,311.0	14,352.3	7,338.0	124.7	125.2	-92.21	-6,975.5	673.7	673.6	424.3	249.28	2.702	
14,400.0	7,311.0	14,452.2	7,338.0	126.4	126.9	-92.22	-7,075.5	673.7	672.2	419.5	252.76	2.660	
14,500.0	7,311.0	14,552.2	7,338.0	128.1	128.7	-92.22	-7,175.5	673.7	670.9	414.6	256.25	2.618	
14,600.0	7,311.0	14,652.2	7,338.0	129.9	130.4	-92.23	-7,275.5	673.7	669.6	409.8	259.74	2.578	
14,700.0	7,311.0	14,752.2	7,338.0	131.6	132.1	-92.23	-7,375.5	673.7	668.2	405.0	263.23	2.539	
14,800.0	7,311.0	14,852.2	7,338.0	133.4	133.9	-92.23	-7,475.5	673.7	666.9	400.2	266.72	2.500	
14,900.0	7,311.0	14,952.2	7,338.0	135.1	135.6	-92.24	-7,575.5	673.7	665.6	395.3	270.20	2.463	
15,000.0	7,311.0	15,052.2	7,338.0	136.9	137.4	-92.24	-7,675.5	673.7	664.2	390.5	273.69	2.427	
15,087.3	7,311.0	15,135.9	7,338.0	138.4	138.8	-92.25	-7,759.2	673.7	663.1	386.4	276.68	2.396	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - WANDELL 8-2-7 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 75-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,100.0	7,311.0	7,507.8	7,348.6	51.9	24.5	90.08	-4,220.5	-479.6	1,512.2	1,444.8	67.35	22.452	
10,200.0	7,311.0	7,507.4	7,348.2	53.6	24.5	90.03	-4,220.5	-479.6	1,416.7	1,347.6	69.05	20.516	
10,300.0	7,311.0	7,507.0	7,347.8	55.3	24.5	89.97	-4,220.5	-479.6	1,321.8	1,251.1	70.76	18.681	
10,400.0	7,311.0	7,506.6	7,347.4	57.0	24.5	89.92	-4,220.5	-479.6	1,227.8	1,155.3	72.46	16.944	
10,500.0	7,311.0	7,506.2	7,347.0	58.7	24.5	89.87	-4,220.5	-479.6	1,134.8	1,060.7	74.17	15.299	
10,600.0	7,311.0	7,505.8	7,346.6	60.5	24.5	89.82	-4,220.5	-479.6	1,043.1	967.3	75.89	13.746	
10,700.0	7,311.0	7,505.4	7,346.2	62.2	24.5	89.77	-4,220.5	-479.6	953.1	875.5	77.60	12.282	
10,800.0	7,311.0	7,505.0	7,345.9	63.9	24.5	89.72	-4,220.5	-479.6	865.3	786.0	79.32	10.909	
10,900.0	7,311.0	7,504.6	7,345.5	65.6	24.5	89.67	-4,220.5	-479.6	780.4	699.4	81.04	9.630	
11,000.0	7,311.0	7,504.2	7,345.1	67.3	24.5	89.62	-4,220.5	-479.6	699.5	616.8	82.76	8.453	
11,069.7	7,311.0	7,504.0	7,344.8	68.5	24.5	89.58	-4,220.5	-479.6	646.3	562.4	83.96	7.698	
11,100.0	7,311.0	7,503.9	7,344.7	69.1	24.5	89.57	-4,220.5	-479.6	624.3	539.8	84.53	7.385	
11,196.4	7,311.0	7,503.5	7,344.3	70.7	24.5	89.53	-4,220.5	-479.6	560.1	473.7	86.35	6.486	
11,200.0	7,311.0	7,503.5	7,344.3	70.8	24.5	89.52	-4,220.5	-479.6	557.9	471.5	86.41	6.456	
11,300.0	7,311.0	7,503.1	7,343.9	72.5	24.5	89.47	-4,220.5	-479.5	503.5	415.4	88.14	5.713	
11,400.0	7,311.0	7,502.7	7,343.5	74.2	24.5	89.42	-4,220.5	-479.5	464.5	374.6	89.86	5.169	
11,500.0	7,311.0	7,502.3	7,343.1	76.0	24.5	89.37	-4,220.5	-479.5	445.0	353.4	91.59	4.858	
11,538.8	7,311.0	7,502.1	7,343.0	76.6	24.5	89.35	-4,220.5	-479.5	443.3	351.0	92.26	4.805	CC, ES
11,600.0	7,311.0	7,501.9	7,342.7	77.7	24.5	89.32	-4,220.5	-479.5	447.5	354.2	93.32	4.795	SF
11,700.0	7,311.0	7,501.5	7,342.3	79.4	24.5	89.27	-4,220.5	-479.5	471.7	376.6	95.05	4.963	
11,800.0	7,311.0	7,501.1	7,342.0	81.2	24.5	89.22	-4,220.5	-479.5	514.5	417.8	96.78	5.317	
11,900.0	7,311.0	7,500.7	7,341.6	82.9	24.5	89.17	-4,220.5	-479.5	571.8	473.3	98.51	5.805	
12,000.0	7,311.0	7,500.3	7,341.2	84.6	24.5	89.12	-4,220.5	-479.5	639.7	539.5	100.24	6.382	
12,100.0	7,311.0	7,499.9	7,340.8	86.4	24.5	89.07	-4,220.5	-479.5	715.2	613.2	101.97	7.013	
12,200.0	7,311.0	7,499.6	7,340.4	88.1	24.5	89.02	-4,220.5	-479.5	796.1	692.4	103.70	7.676	
12,300.0	7,311.0	7,499.2	7,340.0	89.8	24.5	88.97	-4,220.5	-479.5	880.9	775.4	105.44	8.355	
12,400.0	7,311.0	7,498.8	7,339.7	91.6	24.5	88.92	-4,220.5	-479.5	968.6	861.4	107.17	9.038	
12,500.0	7,311.0	7,498.4	7,339.3	93.3	24.5	88.87	-4,220.5	-479.5	1,058.5	949.6	108.91	9.720	
12,600.0	7,311.0	7,498.1	7,338.9	95.0	24.5	88.83	-4,220.5	-479.5	1,150.1	1,039.4	110.64	10.395	
12,700.0	7,311.0	7,497.7	7,338.5	96.8	24.5	88.78	-4,220.5	-479.5	1,243.0	1,130.6	112.38	11.061	
12,800.0	7,311.0	7,497.3	7,338.2	98.5	24.5	88.73	-4,220.5	-479.5	1,336.9	1,222.7	114.11	11.715	
12,900.0	7,311.0	7,497.0	7,337.8	100.3	24.5	88.68	-4,220.5	-479.5	1,431.6	1,315.7	115.85	12.357	
13,000.0	7,311.0	7,496.6	7,337.4	102.0	24.5	88.63	-4,220.5	-479.5	1,527.0	1,409.4	117.58	12.986	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - WANDELL 8-4-7 (EXISTING) - ENCANA WELL - SURVEYS

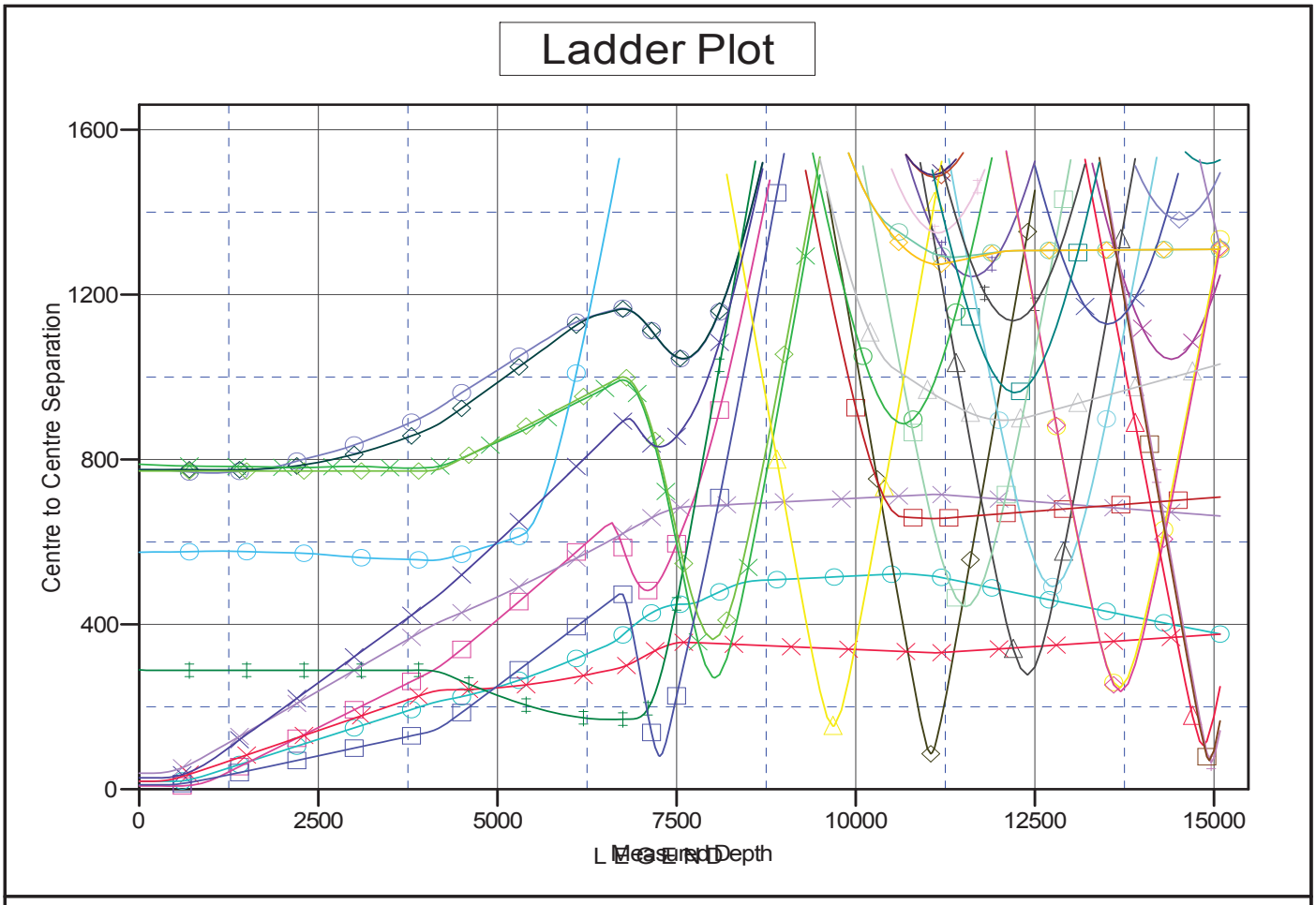
Offset Site Error: 0.0 ft

Survey Program: 106-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,300.0	7,311.0	7,751.2	7,354.5	72.5	37.2	90.64	-5,430.4	-512.0	1,529.4	1,424.3	105.18	14.541	
11,400.0	7,311.0	7,750.8	7,354.1	74.2	37.2	90.60	-5,430.4	-512.0	1,435.1	1,328.2	106.91	13.424	
11,500.0	7,311.0	7,750.4	7,353.7	76.0	37.2	90.55	-5,430.4	-512.0	1,341.6	1,233.0	108.64	12.349	
11,600.0	7,311.0	7,750.0	7,353.3	77.7	37.2	90.50	-5,430.4	-512.0	1,249.1	1,138.7	110.37	11.318	
11,700.0	7,311.0	7,749.6	7,352.9	79.4	37.2	90.46	-5,430.4	-512.0	1,157.9	1,045.8	112.10	10.329	
11,800.0	7,311.0	7,749.2	7,352.5	81.2	37.2	90.41	-5,430.4	-512.0	1,068.2	954.4	113.83	9.384	
11,900.0	7,311.0	7,748.8	7,352.1	82.9	37.2	90.36	-5,430.4	-512.0	980.5	864.9	115.57	8.484	
12,000.0	7,311.0	7,748.4	7,351.7	84.6	37.2	90.32	-5,430.4	-512.0	895.4	778.1	117.30	7.634	
12,100.0	7,311.0	7,748.0	7,351.3	86.4	37.2	90.27	-5,430.4	-512.0	813.7	694.7	119.03	6.836	
12,200.0	7,311.0	7,747.6	7,350.9	88.1	37.2	90.22	-5,430.4	-512.0	736.5	615.8	120.77	6.099	
12,300.0	7,311.0	7,747.2	7,350.5	89.8	37.2	90.18	-5,430.4	-512.0	665.5	543.0	122.51	5.432	
12,400.0	7,311.0	7,746.8	7,350.1	91.6	37.2	90.13	-5,430.4	-512.0	602.7	478.4	124.24	4.851	
12,500.0	7,311.0	7,746.4	7,349.7	93.3	37.2	90.08	-5,430.4	-512.0	551.0	425.0	125.98	4.374	
12,600.0	7,311.0	7,746.0	7,349.3	95.0	37.2	90.03	-5,430.4	-512.0	513.8	386.1	127.72	4.023	
12,700.0	7,311.0	7,745.6	7,348.9	96.8	37.2	89.99	-5,430.4	-512.0	494.3	364.9	129.46	3.818	
12,748.2	7,311.0	7,745.4	7,348.7	97.6	37.2	89.96	-5,430.4	-512.0	492.0	361.7	130.29	3.776	CC, ES
12,800.0	7,311.0	7,745.2	7,348.5	98.5	37.2	89.94	-5,430.4	-512.0	494.7	363.5	131.19	3.771	SF
12,900.0	7,311.0	7,744.8	7,348.1	100.3	37.2	89.89	-5,430.4	-512.0	514.9	381.9	132.93	3.873	
13,000.0	7,311.0	7,744.4	7,347.7	102.0	37.2	89.84	-5,430.4	-512.0	552.7	418.0	134.67	4.104	
13,100.0	7,311.0	7,744.0	7,347.2	103.7	37.2	89.79	-5,430.4	-512.0	604.8	468.4	136.41	4.434	
13,200.0	7,311.0	7,743.5	7,346.8	105.5	37.2	89.75	-5,430.4	-512.0	668.0	529.8	138.15	4.835	
13,300.0	7,311.0	7,743.1	7,346.4	107.2	37.2	89.70	-5,430.4	-512.0	739.3	599.4	139.89	5.285	
13,400.0	7,311.0	7,742.7	7,346.0	109.0	37.2	89.65	-5,430.4	-512.0	816.6	675.0	141.63	5.766	
13,500.0	7,311.0	7,742.3	7,345.6	110.7	37.2	89.60	-5,430.4	-512.0	898.5	755.1	143.38	6.267	
13,600.0	7,311.0	7,741.9	7,345.2	112.4	37.2	89.55	-5,430.4	-512.0	983.7	838.6	145.12	6.779	
13,700.0	7,311.0	7,741.5	7,344.7	114.2	37.2	89.50	-5,430.4	-512.0	1,071.4	924.6	146.86	7.296	
13,800.0	7,311.0	7,741.0	7,344.3	115.9	37.2	89.45	-5,430.4	-512.0	1,161.2	1,012.6	148.60	7.814	
13,900.0	7,311.0	7,740.6	7,343.9	117.7	37.2	89.41	-5,430.4	-512.0	1,252.5	1,102.1	150.34	8.331	
14,000.0	7,311.0	7,740.2	7,343.5	119.4	37.2	89.36	-5,430.4	-512.0	1,345.0	1,192.9	152.08	8.844	
14,100.0	7,311.0	7,739.8	7,343.1	121.2	37.2	89.31	-5,430.5	-512.0	1,438.6	1,284.7	153.83	9.352	
14,200.0	7,311.0	7,739.3	7,342.6	122.9	37.2	89.26	-5,430.5	-512.0	1,532.9	1,377.3	155.57	9.854	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Vogl-McCoy 2B-5H-E267
Project:	DJ Wattenberg	**TVD Reference:**	KB @ 4865.0ft (Ensign)
Reference Site:	S5-T2N-R67W (Vogl-McCoy)	**MD Reference:**	KB @ 4865.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Vogl-McCoy 2B-5H-E267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #3	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 4865.0ft (Ensign)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

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