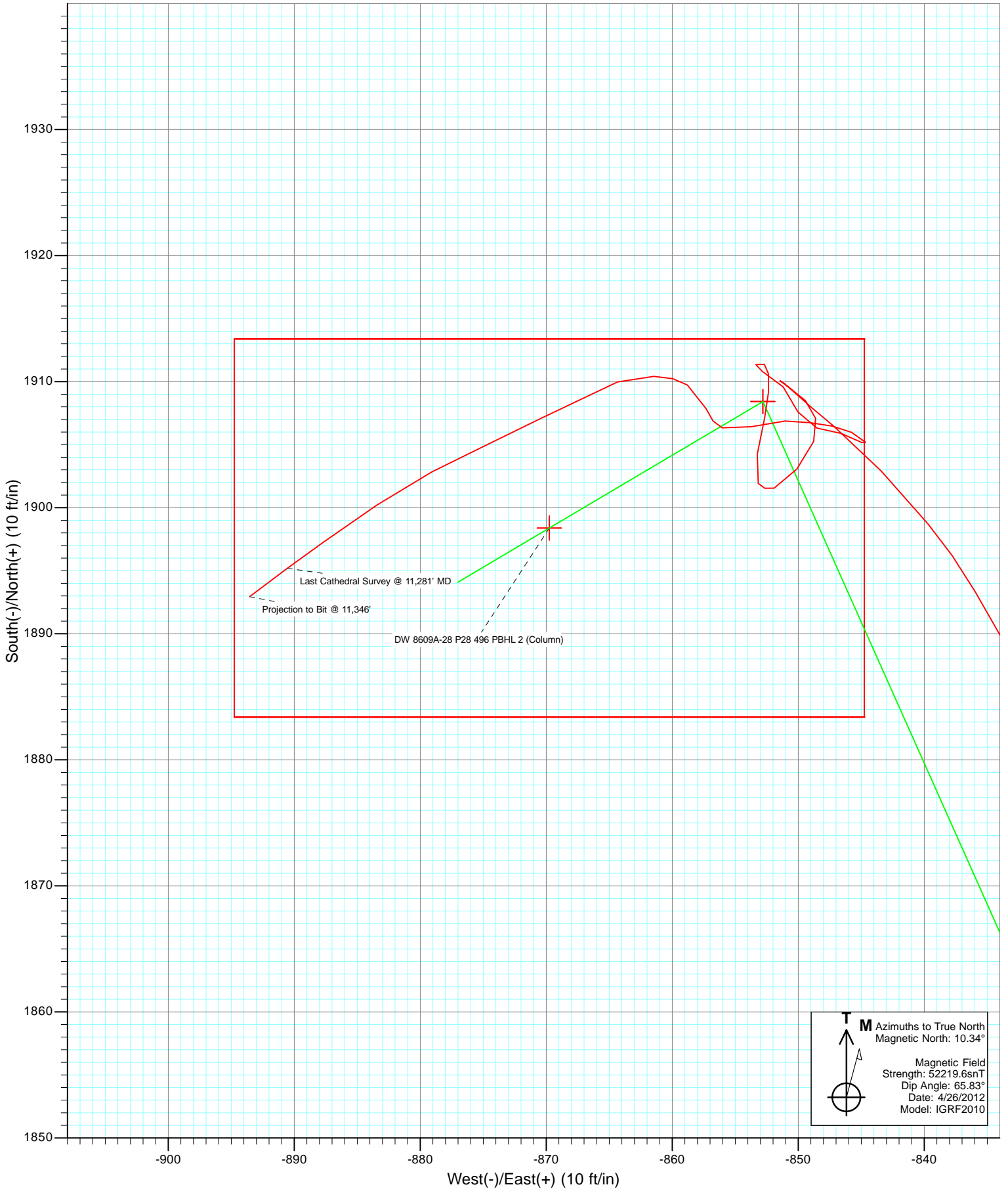


Azimuths to True North
 Magnetic North: 10.34°

Magnetic Field
 Strength: 52219.6nT
 Dip Angle: 65.83°
 Date: 4/26/2012
 Model: IGRF2010

DD DW 8609A-28 (P28 496) 125055/137955 (SH) 125131/142955 (MH); SC						
KBE @ 7813.0ft (Patterson 308) North American Datum 1983 Well DW 8609A-28 (P28 496), True North						
Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
Name	Target	335.38	Slot	0.0	0.0	0.0
	TVDD	+N/-S	+E/-W	Latitude	Longitude	
DW 8609A-28 P28 496 TGT 2 (Column)	7244.0	1908.4	-852.8	39° 40' 23.71 N	108° 10' 7.46 W	
DW 8609A-28 P28 496 PBHL 2 (Column)	10824.0	1898.4	-869.8	39° 40' 23.61 N	108° 10' 7.67 W	



Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well DW 8609A-28 (P28 496)
Project: Double Willow	TVD Reference: KBE @ 7813.0ft (Patterson 308)
Site: S28-T4S-R96W (P28 496)(column pattern)	MD Reference: KBE @ 7813.0ft (Patterson 308)
Well: DW 8609A-28 (P28 496)	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: DD	Database: USA EDM 5000 Multi Users DB

Project Double Willow		
Map System: US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum: North American Datum 1983		
Map Zone: Colorado Central Zone		

Site S28-T4S-R96W (P28 496)(column pattern)					
Site Position:	Northing:	1,679,243.29 ft	Latitude:	39° 40' 5.13 N	
From: Lat/Long	Easting:	2,249,687.54 ft	Longitude:	108° 9' 56.55 W	
Position Uncertainty: 0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.68 °	

Well DW 8609A-28 (P28 496)					
Well Position	+N/-S	0.0 ft	Northing:	1,679,215.25 ft	Latitude: 39° 40' 4.85 N
	+E/-W	0.0 ft	Easting:	2,249,686.58 ft	Longitude: 108° 9' 56.55 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 7,780.0 ft

Wellbore DD					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/26/2012	10.34	65.83	52,220

Design DD					
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	335.38	

Survey Program Date 5/11/2012					
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
173.0	11,346.0	Survey #1 (DD)	MWD	Geolink MWD	

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
173.0	0.30	346.80	173.0	0.4	-0.1	0.4	0.17	0.17	
203.0	0.80	347.30	203.0	0.7	-0.2	0.7	1.67	1.67	
233.0	1.20	335.80	233.0	1.2	-0.3	1.2	1.49	1.33	
262.0	1.50	340.00	262.0	1.8	-0.6	1.9	1.09	1.03	
292.0	2.50	335.70	292.0	2.8	-1.0	3.0	3.37	3.33	
322.0	2.90	335.00	321.9	4.1	-1.6	4.4	1.34	1.33	
352.0	3.60	340.00	351.9	5.7	-2.2	6.1	2.52	2.33	
383.0	4.70	330.70	382.8	7.7	-3.2	8.3	4.15	3.55	
414.0	6.10	331.70	413.7	10.2	-4.6	11.2	4.53	4.52	
444.0	6.40	335.30	443.5	13.2	-6.0	14.5	1.64	1.00	
474.0	7.40	332.20	473.3	16.4	-7.6	18.1	3.56	3.33	
505.0	7.90	328.70	504.0	20.0	-9.7	22.2	2.20	1.61	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well DW 8609A-28 (P28 496)
Project:	Double Willow	TD Reference:	KBE @ 7813.0ft (Patterson 308)
Site:	S28-T4S-R96W (P28 496)(column pattern)	MVD Reference:	KBE @ 7813.0ft (Patterson 308)
Well:	DW 8609A-28 (P28 496)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
553.0	9.30	322.80	551.5	25.9	-13.7	29.3	3.44	2.92	
599.0	11.00	323.30	596.7	32.4	-18.6	37.2	3.70	3.70	
645.0	12.80	326.10	641.7	40.1	-24.1	46.5	4.11	3.91	
691.0	14.20	329.10	686.5	49.2	-29.8	57.1	3.40	3.04	
736.0	15.60	332.10	730.0	59.3	-35.5	68.7	3.55	3.11	
782.0	17.10	333.80	774.1	70.8	-41.4	81.6	3.42	3.26	
828.0	18.20	334.40	817.9	83.4	-47.5	95.5	2.42	2.39	
874.0	18.70	339.20	861.6	96.7	-53.2	110.1	3.48	1.09	
965.0	21.00	344.50	947.2	126.1	-62.7	140.8	3.21	2.53	
1,057.0	20.90	338.20	1,033.1	157.2	-73.2	173.4	2.45	-0.11	
1,148.0	20.30	335.00	1,118.3	186.6	-85.9	205.4	1.40	-0.66	
1,240.0	18.60	333.90	1,205.0	214.2	-99.1	236.1	1.89	-1.85	
1,331.0	18.40	334.20	1,291.3	240.2	-111.8	264.9	0.24	-0.22	
1,423.0	18.60	335.90	1,378.6	266.7	-124.1	294.1	0.63	0.22	
1,514.0	18.90	335.10	1,464.7	293.3	-136.2	323.4	0.43	0.33	
1,606.0	17.80	334.10	1,552.1	319.4	-148.6	352.3	1.24	-1.20	
1,698.0	16.70	335.80	1,639.9	344.2	-160.2	379.6	1.32	-1.20	
1,789.0	16.50	335.50	1,727.1	367.8	-170.9	405.6	0.24	-0.22	
1,881.0	16.20	338.90	1,815.4	391.7	-180.9	431.5	1.09	-0.33	
1,972.0	16.20	340.00	1,902.8	415.5	-189.8	456.8	0.34	0.00	
2,056.0	15.90	338.60	1,983.5	437.2	-198.0	480.0	0.58	-0.36	
2,163.0	13.60	333.60	2,087.0	462.1	-209.0	507.2	2.45	-2.15	
2,255.0	13.10	326.30	2,176.5	480.5	-219.6	528.3	1.91	-0.54	
2,346.0	13.50	330.50	2,265.1	498.3	-230.5	549.0	1.15	0.44	
2,438.0	14.00	330.90	2,354.4	517.4	-241.2	570.8	0.55	0.54	
2,484.0	13.30	327.80	2,399.1	526.7	-246.8	581.6	2.20	-1.52	
2,529.0	14.60	331.90	2,442.8	536.1	-252.2	592.4	3.63	2.89	
2,621.0	19.10	337.60	2,530.8	560.3	-263.4	619.1	5.20	4.89	
2,712.0	21.40	341.10	2,616.2	589.7	-274.5	650.5	2.86	2.53	
2,804.0	21.10	336.90	2,702.0	620.8	-286.4	683.7	1.69	-0.33	
2,895.0	21.00	336.20	2,786.9	650.8	-299.4	716.4	0.30	-0.11	
2,987.0	20.80	337.50	2,872.8	681.0	-312.3	749.2	0.55	-0.22	
3,079.0	19.00	339.10	2,959.3	710.1	-323.9	780.5	2.04	-1.96	
3,170.0	14.80	336.90	3,046.4	734.6	-333.7	806.9	4.67	-4.62	
3,262.0	14.20	336.20	3,135.5	755.8	-342.9	829.9	0.68	-0.65	
3,353.0	14.10	332.50	3,223.7	775.8	-352.5	852.1	1.00	-0.11	
3,444.0	13.80	336.30	3,312.0	795.6	-362.0	874.1	1.06	-0.33	
3,535.0	16.80	343.50	3,399.8	818.1	-370.1	897.9	3.90	3.30	
3,627.0	18.70	346.60	3,487.4	845.2	-377.3	925.6	2.31	2.07	
3,718.0	19.50	344.10	3,573.4	874.0	-384.8	954.9	1.26	0.88	
3,810.0	20.00	338.40	3,660.0	903.4	-394.8	985.8	2.16	0.54	
3,901.0	18.20	331.80	3,746.0	930.4	-407.3	1,015.5	3.09	-1.98	
3,993.0	18.20	340.10	3,833.4	956.6	-419.0	1,044.2	2.82	0.00	
4,084.0	19.30	338.30	3,919.6	983.9	-429.4	1,073.4	1.37	1.21	
4,176.0	20.50	332.10	4,006.1	1,012.3	-442.5	1,104.6	2.64	1.30	
4,267.0	18.50	335.50	4,091.9	1,039.5	-456.0	1,135.0	2.53	-2.20	
4,359.0	19.80	332.80	4,178.8	1,066.7	-469.2	1,165.2	1.71	1.41	
4,450.0	20.20	331.50	4,264.3	1,094.2	-483.7	1,196.2	0.66	0.44	
4,542.0	18.00	331.70	4,351.2	1,120.7	-498.0	1,226.3	2.39	-2.39	
4,633.0	18.80	333.00	4,437.6	1,146.1	-511.3	1,254.9	0.99	0.88	
4,725.0	19.60	330.40	4,524.5	1,172.7	-525.7	1,285.1	1.27	0.87	
4,817.0	20.40	335.70	4,610.9	1,200.8	-539.9	1,316.5	2.15	0.87	
4,908.0	18.50	339.80	4,696.7	1,228.8	-551.4	1,346.8	2.57	-2.09	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well DW 8609A-28 (P28 496)
Project:	Double Willow	TD Reference:	KBE @ 7813.0ft (Patterson 308)
Site:	S28-T4S-R96W (P28 496)(column pattern)	MVD Reference:	KBE @ 7813.0ft (Patterson 308)
Well:	DW 8609A-28 (P28 496)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
5,000.0	19.70	332.40	4,783.7	1,256.2	-563.7	1,376.8	2.93	1.30	
5,091.0	21.30	340.20	4,868.9	1,285.4	-576.4	1,408.6	3.48	1.76	
5,183.0	19.20	338.00	4,955.2	1,315.1	-587.7	1,440.4	2.43	-2.28	
5,274.0	18.80	340.90	5,041.3	1,342.9	-598.1	1,469.9	1.13	-0.44	
5,366.0	20.10	335.70	5,128.0	1,371.3	-609.4	1,500.5	2.35	1.41	
5,457.0	17.80	341.20	5,214.1	1,398.7	-620.4	1,530.0	3.20	-2.53	
5,549.0	18.20	340.30	5,301.6	1,425.5	-629.7	1,558.3	0.53	0.43	
5,641.0	19.00	336.30	5,388.8	1,452.8	-640.6	1,587.6	1.64	0.87	
5,732.0	18.40	328.90	5,475.0	1,478.7	-654.0	1,616.7	2.69	-0.66	
5,823.0	18.80	332.90	5,561.3	1,504.0	-668.1	1,645.6	1.47	0.44	
5,915.0	18.80	331.50	5,648.4	1,530.2	-681.9	1,675.2	0.49	0.00	
6,007.0	19.10	327.30	5,735.4	1,555.9	-697.1	1,704.9	1.52	0.33	
6,098.0	17.00	328.50	5,821.9	1,579.8	-712.1	1,732.8	2.34	-2.31	
6,190.0	17.60	334.70	5,909.7	1,603.8	-725.1	1,760.1	2.11	0.65	
6,281.0	19.70	333.20	5,995.9	1,630.0	-737.9	1,789.2	2.37	2.31	
6,373.0	21.50	341.10	6,082.1	1,659.8	-750.3	1,821.5	3.60	1.96	
6,465.0	20.70	342.00	6,167.9	1,691.2	-760.8	1,854.4	0.94	-0.87	
6,557.0	18.80	343.70	6,254.5	1,720.9	-770.0	1,885.2	2.16	-2.07	
6,648.0	17.40	342.30	6,341.0	1,747.9	-778.3	1,913.2	1.61	-1.54	
6,740.0	16.10	344.60	6,429.1	1,773.3	-785.8	1,939.5	1.59	-1.41	
6,832.0	15.20	342.00	6,517.7	1,797.1	-792.9	1,964.1	1.24	-0.98	
6,923.0	13.90	343.80	6,605.7	1,818.9	-799.7	1,986.7	1.51	-1.43	
7,015.0	11.90	331.50	6,695.4	1,837.9	-807.3	2,007.1	3.68	-2.17	
7,106.0	10.80	332.00	6,784.7	1,853.7	-815.8	2,025.0	1.21	-1.21	
7,198.0	7.70	333.90	6,875.4	1,866.8	-822.5	2,039.8	3.39	-3.37	
7,289.0	6.80	335.00	6,965.7	1,877.2	-827.5	2,051.2	1.00	-0.99	
7,381.0	5.80	331.90	7,057.2	1,886.2	-832.0	2,061.3	1.15	-1.09	
7,472.0	4.50	329.50	7,147.8	1,893.3	-836.0	2,069.5	1.45	-1.43	
7,564.0	3.70	319.80	7,239.6	1,898.7	-839.7	2,075.9	1.15	-0.87	
7,656.0	3.30	317.00	7,331.4	1,902.9	-843.4	2,081.3	0.47	-0.43	
7,747.0	3.20	309.70	7,422.2	1,906.5	-847.2	2,086.1	0.47	-0.11	
7,839.0	1.90	312.20	7,514.1	1,909.1	-850.3	2,089.8	1.42	-1.41	
7,930.0	0.10	211.70	7,605.1	1,910.1	-851.4	2,091.1	2.11	-1.98	
8,022.0	1.10	121.50	7,697.1	1,909.5	-850.7	2,090.4	1.20	1.09	
8,113.0	1.00	136.90	7,788.1	1,908.5	-849.4	2,088.9	0.33	-0.11	
8,204.0	1.10	162.60	7,879.1	1,907.1	-848.6	2,087.3	0.52	0.11	
8,297.0	1.30	203.10	7,972.1	1,905.3	-848.8	2,085.7	0.92	0.22	
8,387.0	2.00	216.40	8,062.1	1,903.1	-850.1	2,084.2	0.88	0.78	
8,479.0	1.10	255.90	8,154.0	1,901.6	-851.9	2,083.6	1.46	-0.98	
8,570.0	0.90	325.30	8,245.0	1,901.9	-853.2	2,084.5	1.26	-0.22	
8,662.0	2.20	11.00	8,337.0	1,904.3	-853.2	2,086.6	1.85	1.41	
8,753.0	1.50	11.80	8,427.9	1,907.1	-852.7	2,089.0	0.77	-0.77	
8,845.0	1.10	4.50	8,519.9	1,909.2	-852.4	2,090.7	0.47	-0.43	
8,936.0	0.70	352.20	8,610.9	1,910.6	-852.4	2,092.0	0.49	-0.44	
9,028.0	0.40	309.20	8,702.9	1,911.4	-852.7	2,092.8	0.53	-0.33	
9,119.0	0.60	242.30	8,793.9	1,911.4	-853.4	2,093.1	0.63	0.22	
9,211.0	1.20	108.50	8,885.9	1,910.8	-852.9	2,092.4	1.82	0.65	
9,303.0	1.50	140.80	8,977.9	1,909.6	-851.2	2,090.6	0.87	0.33	
9,390.0	1.60	158.00	9,064.8	1,907.6	-850.0	2,088.3	0.54	0.11	
9,481.0	1.30	94.90	9,155.8	1,906.3	-848.5	2,086.5	1.69	-0.33	
9,573.0	1.20	110.50	9,247.8	1,905.9	-846.6	2,085.3	0.38	-0.11	
9,665.0	1.00	118.00	9,339.7	1,905.2	-845.0	2,084.0	0.27	-0.22	
9,756.0	0.70	314.00	9,430.7	1,905.2	-844.7	2,083.9	1.85	-0.33	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well DW 8609A-28 (P28 496)
Project: Double Willow	TVD Reference: KBE @ 7813.0ft (Patterson 308)
Site: S28-T4S-R96W (P28 496)(column pattern)	MD Reference: KBE @ 7813.0ft (Patterson 308)
Well: DW 8609A-28 (P28 496)	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: DD	Database: USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
9,848.0	1.00	299.80	9,522.7	1,906.0	-845.8	2,085.0	0.40	0.33	
9,939.0	1.10	277.10	9,613.7	1,906.5	-847.3	2,086.2	0.47	0.11	
10,031.0	1.10	280.30	9,705.7	1,906.7	-849.1	2,087.1	0.07	0.00	
10,122.0	1.40	268.80	9,796.7	1,906.9	-851.0	2,088.1	0.43	0.33	
10,214.0	2.00	254.50	9,888.6	1,906.4	-853.7	2,088.8	0.79	0.65	
10,305.0	1.10	292.50	9,979.6	1,906.3	-856.0	2,089.7	1.45	-0.99	
10,397.0	1.60	338.50	10,071.6	1,907.9	-857.3	2,091.6	1.25	0.54	
10,489.0	1.50	303.70	10,163.6	1,909.7	-858.8	2,093.9	1.01	-0.11	
10,580.0	2.10	270.90	10,254.5	1,910.4	-861.5	2,095.6	1.28	0.66	
10,672.0	1.60	248.60	10,346.5	1,910.0	-864.3	2,096.4	0.94	-0.54	
10,855.0	2.60	242.10	10,529.3	1,907.1	-870.4	2,096.3	0.56	0.55	
10,946.0	3.10	245.40	10,620.2	1,905.1	-874.4	2,096.2	0.58	0.55	
11,038.0	3.30	242.60	10,712.1	1,902.9	-879.1	2,096.1	0.28	0.22	
11,129.0	3.20	235.00	10,802.9	1,900.2	-883.5	2,095.5	0.49	-0.11	
11,221.0	3.30	235.30	10,894.8	1,897.2	-887.7	2,094.6	0.11	0.11	
11,281.0	3.30	233.00	10,954.7	1,895.2	-890.5	2,093.9	0.22	0.00	Last Cathedral Survey @ 11,281' MD
11,346.0	3.30	233.00	11,019.6	1,892.9	-893.5	2,093.1	0.00	0.00	Projection to Bit @ 11,346'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
DW 8609A-28 P28 496 ^ˆ - hit/miss target - Shape	0.00	0.00	7,244.0	1,908.4	-852.8	1,681,147.87	2,248,890.14	39° 40' 23.71 N	108° 10' 7.46 W
- actual wellpath misses target center by 16.0ft at 7569.4ft MD (7245.0 TVD, 1899.0 N, -839.9 E)									
- Point									
DW 8609A-28 P28 496 I	0.00	0.00	10,824.0	1,898.4	-869.8	1,681,138.34	2,248,872.90	39° 40' 23.61 N	108° 10' 7.67 W
- actual wellpath misses target center by 14.7ft at 11149.4ft MD (10823.4 TVD, 1899.5 N, -884.4 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
DW 8609A-28 P28 496 I	0.00	0.00	10,841.0	1,898.4	-869.8	1,681,138.34	2,248,872.90	39° 40' 23.61 N	108° 10' 7.67 W
- actual wellpath misses target center by 15.5ft at 11166.4ft MD (10840.3 TVD, 1899.0 N, -885.2 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
DW 8609A-28 P28 496 ^ˆ - hit/miss target - Shape	0.00	0.00	7,181.0	1,908.4	-852.8	1,681,147.87	2,248,890.14	39° 40' 23.71 N	108° 10' 7.46 W
- actual wellpath misses target center by 20.1ft at 7506.7ft MD (7182.4 TVD, 1895.6 N, -837.3 E)									
- Point									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
11,281.0	10,954.7	1,895.2	-890.5	Last Cathedral Survey @ 11,281' MD	
11,346.0	11,019.6	1,892.9	-893.5	Projection to Bit @ 11,346'	

Checked By: _____ Approved By: _____ Date: _____