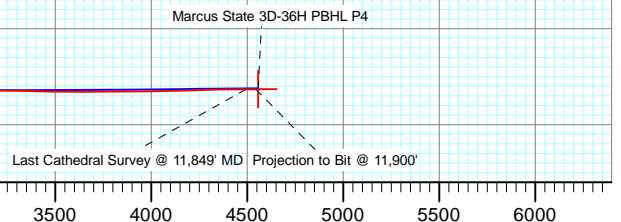


DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Marcus State 3D-36H PBHL P4	4557.1	198.6	1280501.60	3215593.39	40.100790	-104.729320

FINAL
 Marcus State 3D-36H
 251555 135329; 252155 135402 LR
 KBE @ 5052.0ft (Ensign 135)
 Ground Elevation @ 5039.0
 North American Datum 1983
 Well Marcus State 3D-36H, True North

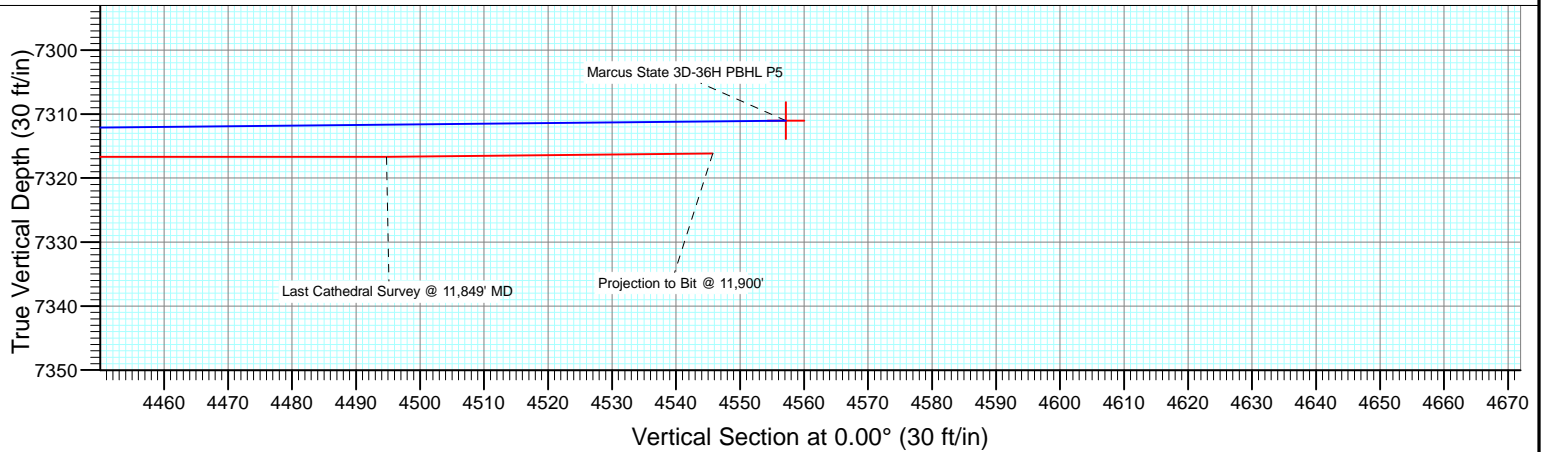
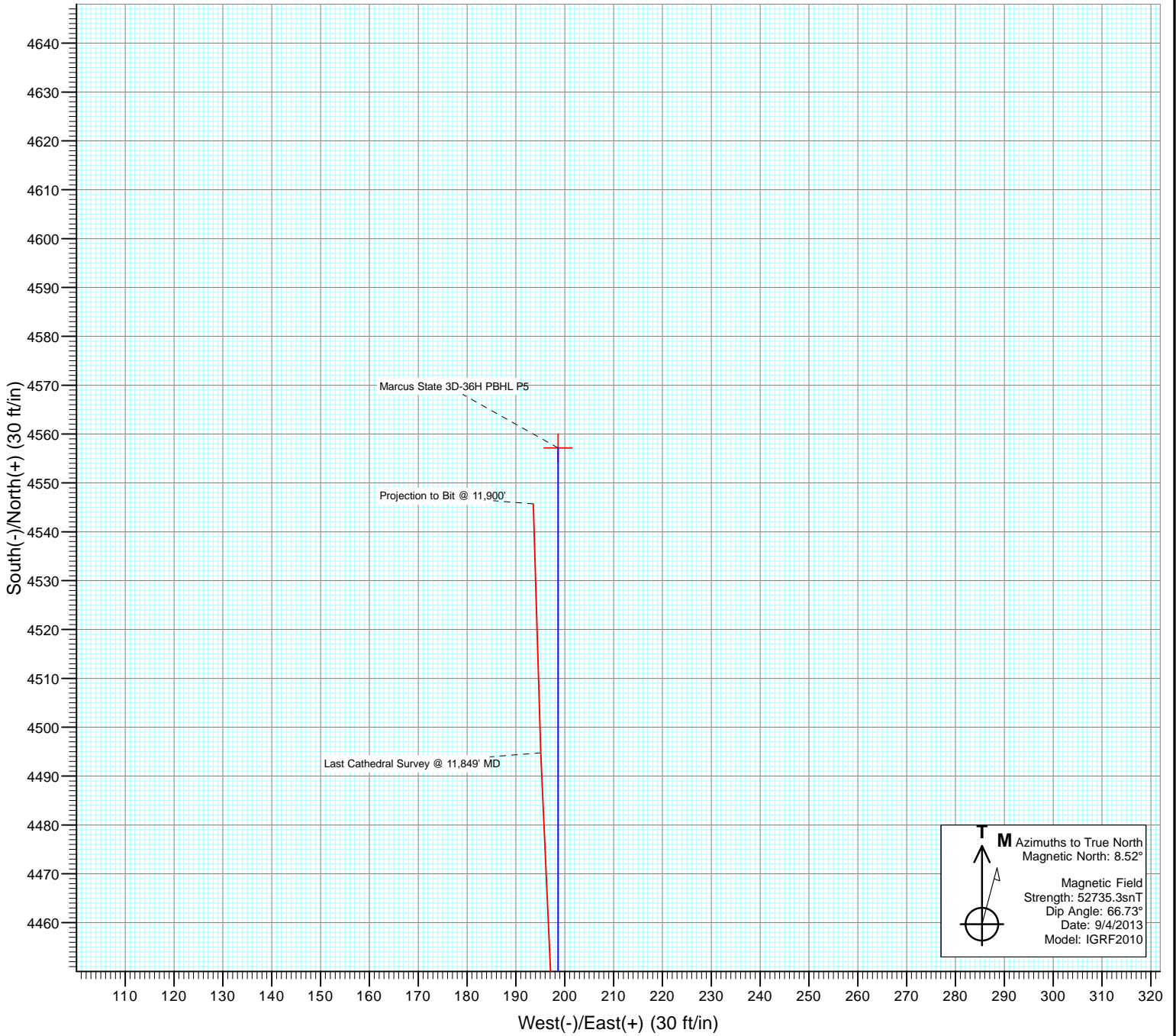
T Azimuths to True North
 Magnetic North: 8.52°

Magnetic Field
 Strength: 52735.3snT
 Dip Angle: 66.73°
 Date: 9/4/2013
 Model: IGRF2010





Project: DJ Wattenberg
Site: S36 T2N-R66W (Marcus State)
Well: Marcus State 3D-36H
Wellbore: HZ
Design: FINAL



Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Marcus State 3D-36H
Project: DJ Wattenberg	TVD Reference: KBE @ 5052.0ft (Ensign 135)
Site: S36 T2N-R66W (Marcus State)	MD Reference: KBE @ 5052.0ft (Ensign 135)
Well: Marcus State 3D-36H	North Reference: True
Wellbore: HZ	Survey Calculation Method: Minimum Curvature
Design: FINAL	Database: USA EDM 5000 Multi Users DB

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 S36 T2N-R66W (Marcus State)				
Site Position:	Northing: 1,275,942.66 ft	Latitude: 40.088280		
From: Lat/Long	Easting: 3,215,403.58 ft	Longitude: -104.730140		
Position Uncertainty: 0.0 ft	Slot Radius: 13.200 in	Grid Convergence: 0.50 °		

Well Marcus State 3D-36H				
Well Position	+N/-S 0.0 ft	Northing: 1,275,942.90 ft	Latitude: 40.088280	
	+E/-W 0.0 ft	Easting: 3,215,434.35 ft	Longitude: -104.730030	
Position Uncertainty	0.0 ft	Wellhead Elevation: ft	Ground Level: 5,039.0 ft	

Wellbore HZ					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/4/2013	8.52	66.73	52,735

Design FINAL				
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	0.00

Survey Program		Date 9/15/2013
From (ft)	To (ft)	Survey (Wellbore)
141.0	11,900.0	Survey #1 (HZ)
		Tool Name Geolink MWD
		Description 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	
141.0	0.60	175.10	141.0	-0.7	0.1	-0.7	0.43	0.43	
233.0	0.60	186.10	233.0	-1.7	0.1	-1.7	0.13	0.00	
325.0	0.60	164.60	325.0	-2.6	0.1	-2.6	0.24	0.00	
417.0	0.30	140.90	417.0	-3.3	0.4	-3.3	0.38	-0.33	
509.0	0.40	150.80	509.0	-3.8	0.7	-3.8	0.13	0.11	
601.0	0.20	320.50	601.0	-3.9	0.8	-3.9	0.65	-0.22	
693.0	0.20	336.30	693.0	-3.6	0.6	-3.6	0.06	0.00	
785.0	0.70	359.10	785.0	-2.9	0.5	-2.9	0.57	0.54	
877.0	1.10	351.50	877.0	-1.5	0.4	-1.5	0.45	0.43	
969.0	0.80	316.00	969.0	-0.2	-0.2	-0.2	0.70	-0.33	
1,061.0	0.60	316.10	1,060.9	0.6	-1.0	0.6	0.22	-0.22	
1,153.0	0.50	310.40	1,152.9	1.3	-1.6	1.3	0.12	-0.11	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Marcus State 3D-36H
Project:	DJ Wattenberg	TD Reference:	KBE @ 5052.0ft (Ensign 135)
Site:	S36 T2N-R66W (Marcus State)	MD Reference:	KBE @ 5052.0ft (Ensign 135)
Well:	Marcus State 3D-36H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	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
1,171.0	0.60	299.80	1,170.9	1.4	-1.7	1.4	0.79	0.56	
1,255.0	0.40	294.30	1,254.9	1.7	-2.4	1.7	0.24	-0.24	
1,316.0	1.20	143.00	1,315.9	1.3	-2.2	1.3	2.56	1.31	
1,377.0	2.30	145.90	1,376.9	-0.3	-1.1	-0.3	1.81	1.80	
1,469.0	4.40	147.40	1,468.7	-4.8	1.8	-4.8	2.28	2.28	
1,561.0	4.10	153.50	1,560.5	-10.7	5.2	-10.7	0.59	-0.33	
1,653.0	4.30	143.90	1,652.2	-16.4	8.7	-16.4	0.79	0.22	
1,745.0	3.90	140.10	1,744.0	-21.6	12.7	-21.6	0.53	-0.43	
1,837.0	4.40	156.00	1,835.8	-27.2	16.2	-27.2	1.36	0.54	
1,929.0	4.30	148.30	1,927.5	-33.4	19.4	-33.4	0.64	-0.11	
2,024.0	4.00	144.00	2,022.3	-39.1	23.2	-39.1	0.45	-0.32	
2,119.0	3.60	137.70	2,117.1	-44.0	27.2	-44.0	0.61	-0.42	
2,213.0	3.40	151.30	2,210.9	-48.6	30.5	-48.6	0.91	-0.21	
2,308.0	3.30	145.40	2,305.7	-53.3	33.4	-53.3	0.38	-0.11	
2,403.0	3.20	138.00	2,400.6	-57.5	36.7	-57.5	0.45	-0.11	
2,497.0	3.40	151.80	2,494.4	-61.9	39.8	-61.9	0.87	0.21	
2,592.0	2.80	146.00	2,589.3	-66.4	42.4	-66.4	0.71	-0.63	
2,687.0	2.50	119.70	2,684.2	-69.3	45.5	-69.3	1.31	-0.32	
2,781.0	4.80	125.20	2,778.0	-72.6	50.5	-72.6	2.47	2.45	
2,876.0	3.30	141.10	2,872.7	-77.0	55.5	-77.0	1.96	-1.58	
2,971.0	4.70	155.60	2,967.5	-82.7	58.8	-82.7	1.81	1.47	
3,066.0	4.20	151.10	3,062.2	-89.3	62.1	-89.3	0.64	-0.53	
3,160.0	3.70	144.80	3,156.0	-94.8	65.5	-94.8	0.70	-0.53	
3,255.0	3.60	160.40	3,250.8	-100.1	68.3	-100.1	1.05	-0.11	
3,350.0	3.10	149.30	3,345.6	-105.1	70.6	-105.1	0.86	-0.53	
3,445.0	3.90	159.60	3,440.5	-110.3	73.0	-110.3	1.07	0.84	
3,539.0	3.10	153.50	3,534.3	-115.6	75.3	-115.6	0.94	-0.85	
3,634.0	3.80	158.30	3,629.1	-120.8	77.6	-120.8	0.80	0.74	
3,728.0	3.00	150.90	3,723.0	-125.9	79.9	-125.9	0.97	-0.85	
3,823.0	0.70	170.90	3,817.9	-128.6	81.2	-128.6	2.48	-2.42	
3,886.0	2.40	152.70	3,880.9	-130.2	81.9	-130.2	2.78	2.70	
3,949.0	4.40	153.10	3,943.8	-133.5	83.6	-133.5	3.17	3.17	
4,013.0	5.40	157.70	4,007.5	-138.5	85.9	-138.5	1.68	1.56	
4,107.0	4.80	153.80	4,101.2	-146.1	89.3	-146.1	0.74	-0.64	
4,202.0	4.10	145.80	4,195.9	-152.5	92.9	-152.5	0.98	-0.74	
4,297.0	4.00	160.70	4,290.6	-158.4	95.9	-158.4	1.11	-0.11	
4,392.0	3.40	152.50	4,385.4	-164.0	98.3	-164.0	0.84	-0.63	
4,486.0	4.10	148.10	4,479.2	-169.4	101.4	-169.4	0.80	0.74	
4,581.0	3.40	159.40	4,574.0	-174.9	104.2	-174.9	1.07	-0.74	
4,676.0	4.40	154.00	4,668.8	-180.8	106.8	-180.8	1.12	1.05	
4,771.0	3.90	145.40	4,763.6	-186.7	110.2	-186.7	0.84	-0.53	
4,865.0	4.50	159.80	4,857.3	-192.8	113.3	-192.8	1.29	0.64	
4,960.0	4.10	157.80	4,952.1	-199.5	115.9	-199.5	0.45	-0.42	
5,055.0	3.60	152.80	5,046.8	-205.3	118.5	-205.3	0.63	-0.53	
5,149.0	3.50	155.60	5,140.7	-210.5	121.0	-210.5	0.21	-0.11	
5,244.0	3.30	154.60	5,235.5	-215.6	123.4	-215.6	0.22	-0.21	
5,339.0	3.80	151.20	5,330.3	-220.8	126.1	-220.8	0.57	0.53	
5,434.0	3.40	149.60	5,425.1	-226.0	129.1	-226.0	0.43	-0.42	
5,529.0	2.80	146.80	5,520.0	-230.4	131.7	-230.4	0.65	-0.63	
5,624.0	3.50	140.10	5,614.8	-234.6	134.9	-234.6	0.83	0.74	
5,718.0	3.10	133.80	5,708.7	-238.5	138.6	-238.5	0.57	-0.43	
5,815.0	3.90	142.50	5,805.5	-243.0	142.5	-243.0	0.99	0.82	
5,908.0	3.00	139.00	5,898.3	-247.3	146.0	-247.3	0.99	-0.97	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Marcus State 3D-36H
Project:	DJ Wattenberg	TVD Reference:	KBE @ 5052.0ft (Ensign 135)
Site:	S36 T2N-R66W (Marcus State)	MD Reference:	KBE @ 5052.0ft (Ensign 135)
Well:	Marcus State 3D-36H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	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
6,002.0	3.90	162.90	5,992.2	-252.2	148.5	-252.2	1.78	0.96	
6,097.0	4.20	149.80	6,086.9	-258.3	151.2	-258.3	1.02	0.32	
6,192.0	3.40	144.10	6,181.7	-263.6	154.6	-263.6	0.93	-0.84	
6,286.0	3.50	143.30	6,275.6	-268.2	158.0	-268.2	0.12	0.11	
6,381.0	4.80	138.20	6,370.3	-273.4	162.4	-273.4	1.42	1.37	
6,476.0	4.30	150.80	6,465.0	-279.5	166.8	-279.5	1.17	-0.53	
6,570.0	4.20	155.70	6,558.7	-285.7	169.9	-285.7	0.40	-0.11	
6,665.0	4.00	151.60	6,653.5	-291.8	172.9	-291.8	0.37	-0.21	
6,697.0	4.70	131.60	6,685.4	-293.7	174.4	-293.7	5.19	2.19	
6,728.0	6.40	103.20	6,716.3	-294.9	177.0	-294.9	10.26	5.48	
6,760.0	9.80	80.40	6,748.0	-294.9	181.5	-294.9	14.42	10.62	
6,791.0	13.20	61.60	6,778.3	-292.7	187.2	-292.7	16.19	10.97	
6,823.0	17.50	55.40	6,809.2	-288.3	194.4	-288.3	14.36	13.44	
6,854.0	21.20	53.60	6,838.4	-282.3	202.7	-282.3	12.09	11.94	
6,886.0	24.60	47.30	6,867.9	-274.3	212.3	-274.3	13.09	10.62	
6,917.0	26.30	41.50	6,895.9	-264.8	221.6	-264.8	9.73	5.48	
6,949.0	29.20	34.00	6,924.2	-253.0	230.6	-253.0	14.17	9.06	
6,980.0	32.60	25.50	6,950.8	-239.2	238.5	-239.2	17.83	10.97	
7,012.0	35.60	18.50	6,977.3	-222.6	245.1	-222.6	15.42	9.37	
7,044.0	37.50	12.30	7,003.1	-204.2	250.2	-204.2	12.97	5.94	
7,075.0	39.60	6.10	7,027.3	-185.2	253.2	-185.2	14.18	6.77	
7,107.0	42.70	1.00	7,051.4	-164.2	254.5	-164.2	14.27	9.69	
7,138.0	44.60	359.60	7,073.8	-142.8	254.6	-142.8	6.88	6.13	
7,170.0	46.00	359.80	7,096.4	-120.0	254.5	-120.0	4.40	4.37	
7,202.0	47.70	359.50	7,118.2	-96.7	254.3	-96.7	5.36	5.31	
7,233.0	49.70	358.90	7,138.7	-73.4	254.0	-73.4	6.61	6.45	
7,265.0	51.30	358.10	7,159.1	-48.7	253.4	-48.7	5.36	5.00	
7,296.0	52.50	358.10	7,178.2	-24.3	252.6	-24.3	3.87	3.87	
7,328.0	54.30	357.60	7,197.3	1.3	251.6	1.3	5.76	5.62	
7,359.0	57.40	357.70	7,214.7	27.0	250.5	27.0	10.00	10.00	
7,390.0	61.10	358.40	7,230.5	53.6	249.6	53.6	12.09	11.94	
7,422.0	63.80	358.70	7,245.3	81.9	248.9	81.9	8.48	8.44	
7,454.0	66.30	359.00	7,258.8	111.0	248.3	111.0	7.86	7.81	
7,485.0	68.50	358.90	7,270.7	139.6	247.8	139.6	7.10	7.10	
7,517.0	71.70	358.20	7,281.6	169.6	247.1	169.6	10.21	10.00	
7,548.0	74.70	357.30	7,290.6	199.3	245.9	199.3	10.07	9.68	
7,580.0	78.00	356.00	7,298.1	230.3	244.1	230.3	11.04	10.31	
7,590.0	79.50	355.60	7,300.1	240.1	243.3	240.1	15.50	15.00	
7,668.0	87.00	354.50	7,309.2	317.2	236.7	317.2	9.72	9.62	
7,731.0	87.50	354.90	7,312.2	379.9	230.9	379.9	1.02	0.79	
7,794.0	88.50	357.00	7,314.4	442.7	226.4	442.7	3.69	1.59	
7,857.0	90.40	0.20	7,315.1	505.7	224.9	505.7	5.91	3.02	
7,920.0	86.90	358.20	7,316.5	568.6	224.0	568.6	6.40	-5.56	
7,983.0	85.60	357.50	7,320.7	631.4	221.6	631.4	2.34	-2.06	
8,046.0	85.70	357.40	7,325.4	694.2	218.8	694.2	0.22	0.16	
8,109.0	86.60	357.00	7,329.7	757.0	215.8	757.0	1.56	1.43	
8,173.0	87.60	356.20	7,332.9	820.8	212.0	820.8	2.00	1.56	
8,236.0	90.10	356.70	7,334.2	883.6	208.1	883.6	4.05	3.97	
8,299.0	91.60	358.10	7,333.2	946.6	205.2	946.6	3.26	2.38	
8,394.0	92.90	358.90	7,329.5	1,041.5	202.7	1,041.5	1.61	1.37	
8,488.0	92.00	359.50	7,325.5	1,135.4	201.4	1,135.4	1.15	-0.96	
8,583.0	91.40	0.90	7,322.7	1,230.3	201.8	1,230.3	1.60	-0.63	
8,678.0	89.00	0.50	7,322.3	1,325.3	202.9	1,325.3	2.56	-2.53	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Marcus State 3D-36H
Project:	DJ Wattenberg	TVD Reference:	KBE @ 5052.0ft (Ensign 135)
Site:	S36 T2N-R66W (Marcus State)	MD Reference:	KBE @ 5052.0ft (Ensign 135)
Well:	Marcus State 3D-36H	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	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
8,773.0	90.80	359.30	7,322.5	1,420.3	202.7	1,420.3	2.28	1.89	
8,867.0	90.80	358.50	7,321.2	1,514.3	200.9	1,514.3	0.85	0.00	
8,962.0	89.30	359.30	7,321.1	1,609.2	199.1	1,609.2	1.79	-1.58	
9,057.0	88.80	359.30	7,322.7	1,704.2	198.0	1,704.2	0.53	-0.53	
9,152.0	88.30	359.00	7,325.1	1,799.2	196.5	1,799.2	0.61	-0.53	
9,246.0	88.90	358.90	7,327.4	1,893.1	194.8	1,893.1	0.65	0.64	
9,341.0	89.80	359.20	7,328.5	1,988.1	193.3	1,988.1	1.00	0.95	
9,436.0	88.60	359.60	7,329.8	2,083.1	192.3	2,083.1	1.33	-1.26	
9,531.0	88.50	357.80	7,332.2	2,178.0	190.1	2,178.0	1.90	-0.11	
9,625.0	91.70	359.50	7,332.0	2,272.0	187.9	2,272.0	3.85	3.40	
9,720.0	88.70	0.10	7,331.7	2,367.0	187.6	2,367.0	3.22	-3.16	
9,815.0	91.20	1.50	7,331.8	2,462.0	188.9	2,462.0	3.02	2.63	
9,910.0	89.80	359.80	7,330.9	2,557.0	190.0	2,557.0	2.32	-1.47	
10,005.0	91.40	0.20	7,330.0	2,651.9	190.0	2,651.9	1.74	1.68	
10,099.0	93.30	0.40	7,326.1	2,745.9	190.5	2,745.9	2.03	2.02	
10,162.0	93.50	0.60	7,322.4	2,808.7	191.0	2,808.7	0.45	0.32	
10,226.0	92.00	1.00	7,319.3	2,872.7	191.9	2,872.7	2.43	-2.34	
10,289.0	89.20	0.00	7,318.6	2,935.7	192.4	2,935.7	4.72	-4.44	
10,383.0	89.20	1.00	7,319.9	3,029.6	193.3	3,029.6	1.06	0.00	
10,478.0	88.50	0.60	7,321.9	3,124.6	194.6	3,124.6	0.85	-0.74	
10,573.0	89.70	0.30	7,323.3	3,219.6	195.3	3,219.6	1.30	1.26	
10,667.0	88.90	0.30	7,324.5	3,313.6	195.8	3,313.6	0.85	-0.85	
10,762.0	88.10	359.90	7,327.0	3,408.5	196.0	3,408.5	0.94	-0.84	
10,857.0	89.10	0.80	7,329.3	3,503.5	196.6	3,503.5	1.42	1.05	
10,951.0	90.30	2.20	7,329.8	3,597.5	199.0	3,597.5	1.96	1.28	
11,046.0	90.30	3.80	7,329.3	3,692.3	204.0	3,692.3	1.68	0.00	
11,141.0	89.90	3.20	7,329.1	3,787.1	209.8	3,787.1	0.76	-0.42	
11,204.0	90.40	359.00	7,329.0	3,850.1	211.0	3,850.1	6.71	0.79	
11,298.0	90.90	358.90	7,327.9	3,944.1	209.3	3,944.1	0.54	0.53	
11,361.0	91.10	359.40	7,326.8	4,007.1	208.4	4,007.1	0.85	0.32	
11,425.0	90.90	358.70	7,325.7	4,071.1	207.3	4,071.1	1.14	-0.31	
11,519.0	91.80	358.70	7,323.5	4,165.0	205.2	4,165.0	0.96	0.96	
11,614.0	92.00	358.90	7,320.3	4,259.9	203.2	4,259.9	0.30	0.21	
11,709.0	91.50	358.50	7,317.4	4,354.9	201.0	4,354.9	0.67	-0.53	
11,803.0	89.40	356.70	7,316.7	4,448.8	197.1	4,448.8	2.94	-2.23	
11,849.0	90.60	358.30	7,316.7	4,494.7	195.1	4,494.7	4.35	2.61	Last Cathedral Survey @ 11,849' MD
11,900.0	90.60	358.30	7,316.1	4,545.7	193.6	4,545.7	0.00	0.00	Projection to Bit @ 11,900'

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Marcus State 3D-36H
Project: DJ Wattenberg	TVD Reference: KBE @ 5052.0ft (Ensign 135)
Site: S36 T2N-R66W (Marcus State)	MD Reference: KBE @ 5052.0ft (Ensign 135)
Well: Marcus State 3D-36H	North Reference: True
Wellbore: HZ	Survey Calculation Method: Minimum Curvature
Design: FINAL	Database: USA EDM 5000 Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Marcus State 3D-36H PI - actual wellpath misses target center by 67.3ft at 11900.0ft MD (7316.1 TVD, 4545.7 N, 193.6 E) - Point	0.00	0.00	7,250.0	4,557.1	198.6	1,280,501.60	3,215,593.39	40.100790	-104.729320
Marcus State 3D-36H PI - actual wellpath misses target center by 12.6ft at 11900.0ft MD (7316.1 TVD, 4545.7 N, 193.6 E) - Point	0.00	0.00	7,315.0	4,557.1	198.6	1,280,501.60	3,215,593.39	40.100790	-104.729320
Marcus State 3D-36H PI - actual wellpath misses target center by 13.5ft at 11900.0ft MD (7316.1 TVD, 4545.7 N, 193.6 E) - Point	0.00	0.00	7,311.0	4,557.1	198.6	1,280,501.60	3,215,593.39	40.100790	-104.729320
Marcus State 3D-36H PI - actual wellpath misses target center by 21.8ft at 11900.0ft MD (7316.1 TVD, 4545.7 N, 193.6 E) - Point	0.00	0.00	7,334.0	4,557.1	198.6	1,280,501.60	3,215,593.39	40.100790	-104.729320
Marcus State 3D-36H TCI - actual wellpath misses target center by 8.8ft at 10882.5ft MD (7329.6 TVD, 3529.0 N, 197.0 E) - Point	0.00	0.00	7,321.0	3,529.0	198.6	1,279,473.47	3,215,602.32	40.097968	-104.729320

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)		
11,849.0	7,316.7	4,494.7	195.1	Last Cathedral Survey @ 11,849' MD	
11,900.0	7,316.1	4,545.7	193.6	Projection to Bit @ 11,900'	

Checked By: _____ Approved By: _____ Date: _____