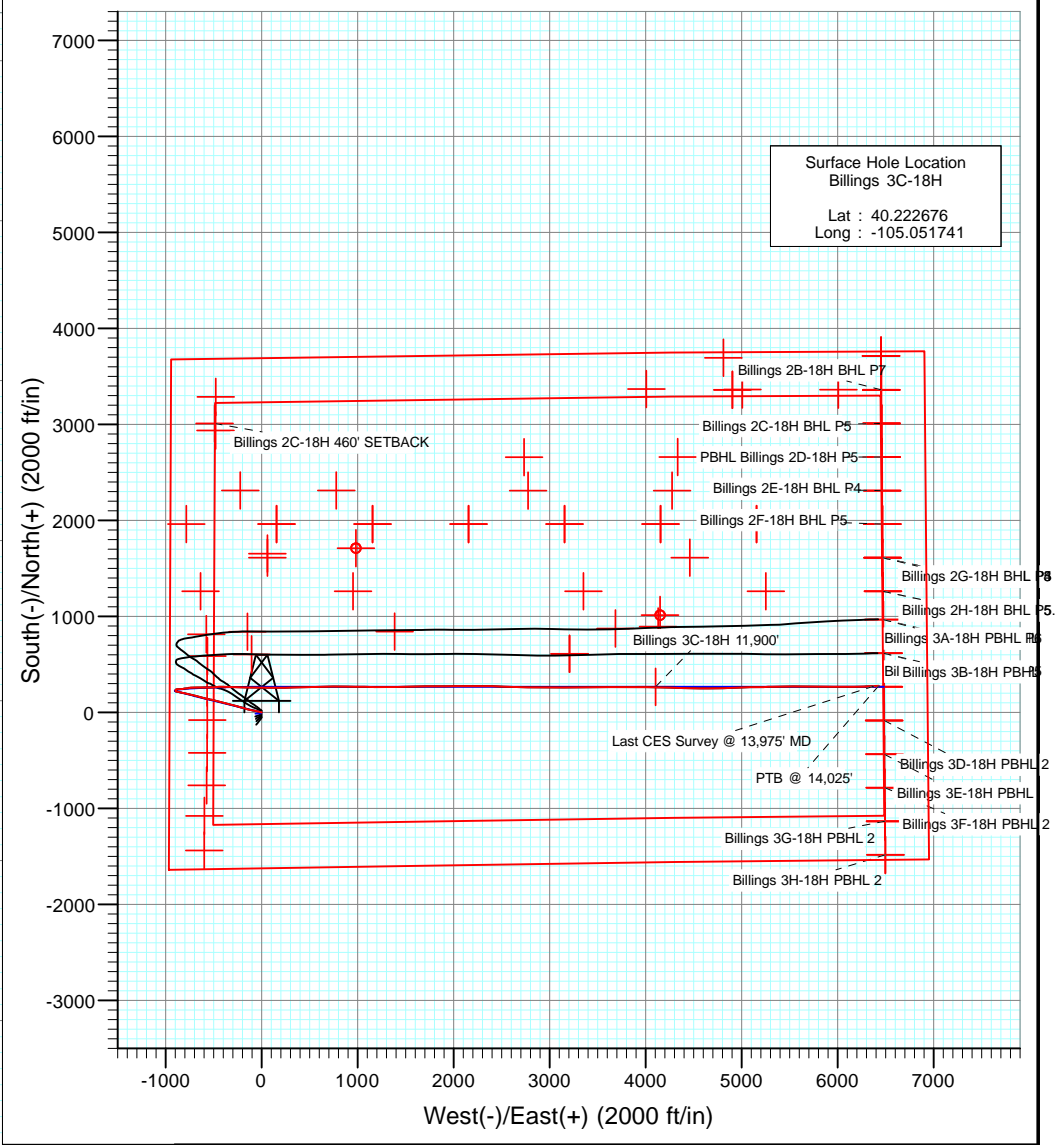
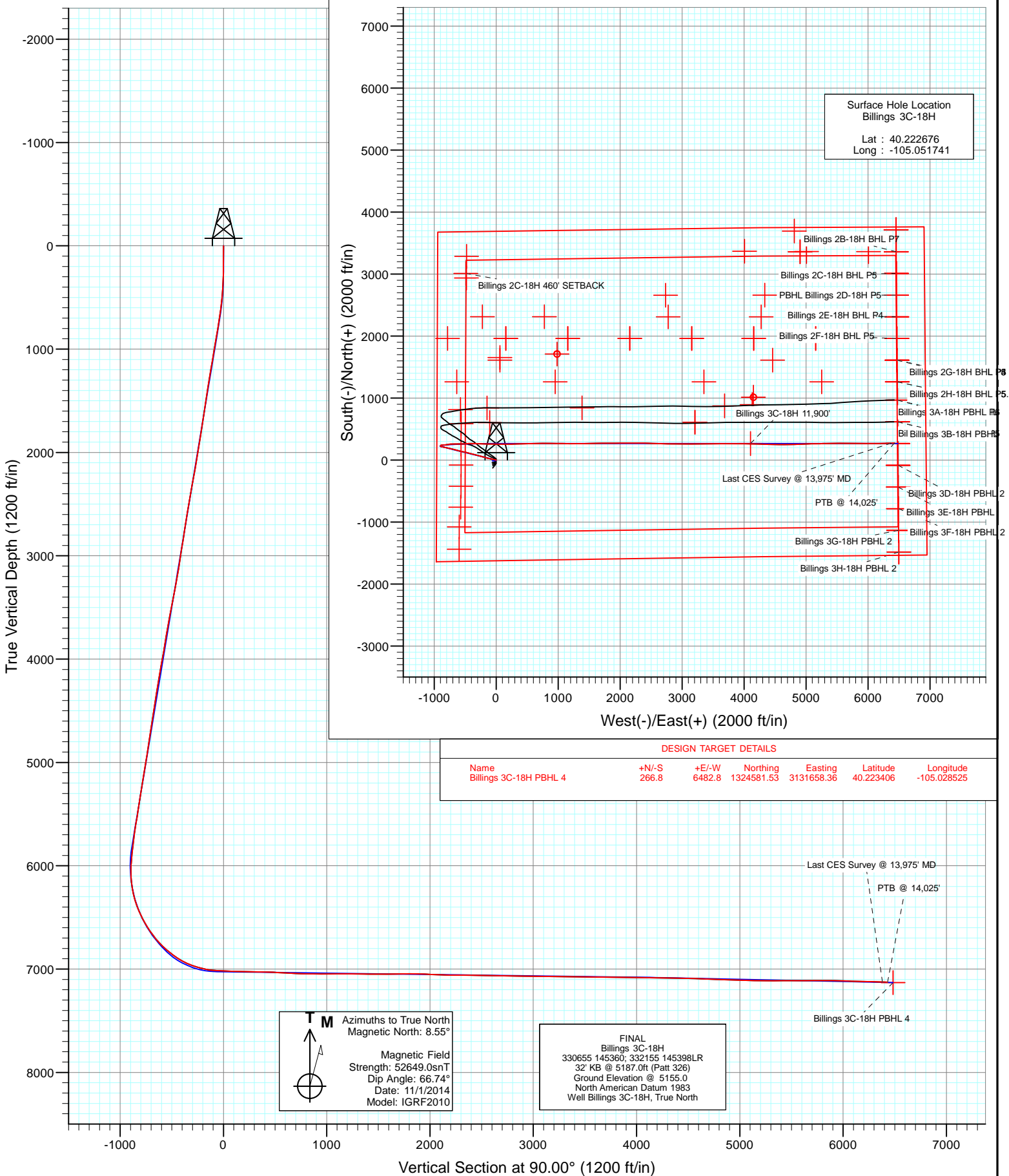


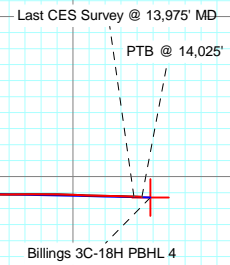


Project: DJ Wattenberg
 Site: S18-T3N-R68W (Billings)
 Well: Billings 3C-18H
 Wellbore: Hz
 Design: FINAL



Surface Hole Location
 Billings 3C-18H
 Lat : 40.222676
 Long : -105.051741

DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Billings 3C-18H PBHL 4	266.8	6482.8	1324581.53	3131658.36	40.223406	-105.028525



T M Azimuths to True North
 Magnetic North: 8.55°
 Magnetic Field
 Strength: 52649.0snT
 Dip Angle: 66.74°
 Date: 11/1/2014
 Model: IGRF2010

FINAL
 Billings 3C-18H
 330655 145360; 332155 145398LR
 32' KB @ 5187.0ft (Patt 326)
 Ground Elevation @ 5155.0
 North American Datum 1983
 Well Billings 3C-18H, True North

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Billings 3C-18H
Project: DJ Wattenberg	TVD Reference: 32' KB @ 5187.0ft (Patt 326)
Site: S18-T3N-R68W (Billings)	MD Reference: 32' KB @ 5187.0ft (Patt 326)
Well: Billings 3C-18H	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 S18-T3N-R68W (Billings)				
Site Position:	Northing:	1,326,724.18 ft	Latitude:	40.229390
From: Lat/Long	Easting:	3,124,452.97 ft	Longitude:	-105.054290
Position Uncertainty: 0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.29 °

Well Billings 3C-18H				
Well Position	+N/-S	0.0 ft	Northing:	1,324,281.97 ft
	+E/-W	0.0 ft	Easting:	3,125,177.04 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Latitude:	40.222676
			Longitude:	-105.051741
			Ground Level:	5,155.0 ft

Wellbore Hz					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/1/2014	8.55	66.74	52,649

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	90.00

Survey Program		Date 11/10/2014
From (ft)	To (ft)	Survey (Wellbore)
240.0	14,025.0	Survey #1 (Hz)
		Tool Name Geolink MWD
		Description Geolink MWD

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	
240.0	0.80	342.70	240.0	1.6	-0.5	-0.5	0.33	0.33	
287.0	1.50	300.00	287.0	2.2	-1.1	-1.1	2.26	1.49	
334.0	2.40	283.40	334.0	2.8	-2.6	-2.6	2.24	1.91	
381.0	3.30	279.30	380.9	3.2	-4.9	-4.9	1.96	1.91	
429.0	4.20	281.50	428.8	3.8	-8.0	-8.0	1.90	1.87	
524.0	6.10	280.60	523.4	5.4	-16.4	-16.4	2.00	2.00	
619.0	7.20	285.60	617.8	7.9	-27.1	-27.1	1.31	1.16	
714.0	9.00	286.50	711.8	11.6	-39.9	-39.9	1.90	1.89	
808.0	9.90	281.60	804.5	15.4	-54.9	-54.9	1.28	0.96	
840.0	10.00	279.20	836.1	16.4	-60.3	-60.3	1.33	0.31	
925.0	9.50	276.00	919.8	18.3	-74.6	-74.6	0.87	-0.59	
1,020.0	9.80	284.80	1,013.5	21.1	-90.2	-90.2	1.58	0.32	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 3C-18H
Project:	DJ Wattenberg	TD Reference:	32' KB @ 5187.0ft (Patt 326)
Site:	S18-T3N-R68W (Billings)	MVD Reference:	32' KB @ 5187.0ft (Patt 326)
Well:	Billings 3C-18H	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
1,111.0	10.10	281.30	1,103.1	24.7	-105.5	-105.5	0.74	0.33	
1,203.0	10.20	279.50	1,193.7	27.6	-121.5	-121.5	0.36	0.11	
1,295.0	9.10	285.40	1,284.4	30.9	-136.5	-136.5	1.61	-1.20	
1,387.0	9.30	283.10	1,375.2	34.5	-150.8	-150.8	0.45	0.22	
1,479.0	8.90	289.40	1,466.0	38.6	-164.7	-164.7	1.17	-0.43	
1,571.0	9.20	289.40	1,556.9	43.4	-178.4	-178.4	0.33	0.33	
1,663.0	9.20	287.30	1,647.7	48.0	-192.3	-192.3	0.36	0.00	
1,755.0	9.10	284.90	1,738.5	52.1	-206.4	-206.4	0.43	-0.11	
1,847.0	8.90	282.90	1,829.4	55.5	-220.3	-220.3	0.40	-0.22	
1,939.0	9.80	285.20	1,920.2	59.2	-234.8	-234.8	1.06	0.98	
2,031.0	9.50	284.00	2,010.9	63.0	-249.8	-249.8	0.39	-0.33	
2,123.0	9.30	285.10	2,101.7	66.8	-264.3	-264.3	0.29	-0.22	
2,215.0	11.20	286.90	2,192.2	71.4	-280.0	-280.0	2.09	2.07	
2,307.0	10.90	285.80	2,282.5	76.3	-297.0	-297.0	0.40	-0.33	
2,400.0	10.50	284.20	2,373.9	80.8	-313.6	-313.6	0.54	-0.43	
2,494.0	10.20	284.80	2,466.3	85.0	-330.0	-330.0	0.34	-0.32	
2,589.0	9.70	283.20	2,559.9	89.0	-345.9	-345.9	0.60	-0.53	
2,683.0	9.10	283.50	2,652.6	92.5	-360.8	-360.8	0.64	-0.64	
2,778.0	8.50	282.40	2,746.5	95.8	-375.0	-375.0	0.66	-0.63	
2,872.0	10.00	285.60	2,839.3	99.5	-389.6	-389.6	1.69	1.60	
2,967.0	9.40	284.40	2,932.9	103.6	-405.1	-405.1	0.67	-0.63	
3,061.0	8.60	283.60	3,025.8	107.2	-419.4	-419.4	0.86	-0.85	
3,156.0	9.30	278.90	3,119.6	110.1	-433.9	-433.9	1.06	0.74	
3,251.0	10.00	287.00	3,213.3	113.7	-449.3	-449.3	1.61	0.74	
3,345.0	11.60	285.80	3,305.6	118.6	-466.2	-466.2	1.72	1.70	
3,439.0	11.10	283.90	3,397.8	123.4	-484.1	-484.1	0.66	-0.53	
3,534.0	11.20	284.20	3,491.0	127.8	-501.9	-501.9	0.12	0.11	
3,628.0	11.10	283.10	3,583.2	132.1	-519.6	-519.6	0.25	-0.11	
3,723.0	10.50	281.50	3,676.5	135.9	-537.0	-537.0	0.71	-0.63	
3,817.0	9.40	279.40	3,769.1	138.9	-553.0	-553.0	1.23	-1.17	
3,912.0	8.70	278.50	3,862.9	141.2	-567.7	-567.7	0.75	-0.74	
4,007.0	11.20	287.80	3,956.5	145.1	-583.6	-583.6	3.12	2.63	
4,101.0	10.90	287.40	4,048.8	150.5	-600.8	-600.8	0.33	-0.32	
4,196.0	9.90	286.40	4,142.2	155.5	-617.2	-617.2	1.07	-1.05	
4,290.0	9.50	282.50	4,234.8	159.5	-632.5	-632.5	0.82	-0.43	
4,385.0	9.40	283.60	4,328.6	163.0	-647.7	-647.7	0.22	-0.11	
4,479.0	9.20	283.90	4,421.3	166.6	-662.5	-662.5	0.22	-0.21	
4,574.0	9.00	283.20	4,515.1	170.1	-677.1	-677.1	0.24	-0.21	
4,668.0	8.50	282.30	4,608.0	173.3	-691.0	-691.0	0.55	-0.53	
4,763.0	9.80	286.80	4,701.8	177.1	-705.6	-705.6	1.56	1.37	
4,857.0	9.10	285.80	4,794.5	181.5	-720.4	-720.4	0.76	-0.74	
4,952.0	8.40	284.60	4,888.4	185.3	-734.4	-734.4	0.76	-0.74	
5,046.0	10.20	285.30	4,981.2	189.2	-749.0	-749.0	1.92	1.91	
5,141.0	9.50	284.10	5,074.8	193.3	-764.8	-764.8	0.77	-0.74	
5,236.0	8.50	282.30	5,168.6	196.7	-779.2	-779.2	1.09	-1.05	
5,330.0	10.50	282.90	5,261.3	200.1	-794.4	-794.4	2.13	2.13	
5,425.0	9.20	277.00	5,354.9	203.0	-810.3	-810.3	1.73	-1.37	
5,519.0	8.10	276.10	5,447.9	204.6	-824.4	-824.4	1.18	-1.17	
5,614.0	9.80	287.00	5,541.7	207.7	-838.8	-838.8	2.52	1.79	
5,709.0	8.70	283.60	5,635.5	211.7	-853.5	-853.5	1.29	-1.16	
5,803.0	7.90	279.90	5,728.5	214.5	-866.8	-866.8	1.02	-0.85	
5,850.0	7.20	277.10	5,775.1	215.4	-872.9	-872.9	1.68	-1.49	
5,898.0	6.50	275.20	5,822.7	216.0	-878.6	-878.6	1.53	-1.46	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 3C-18H
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5187.0ft (Patt 326)
Site:	S18-T3N-R68W (Billings)	MD Reference:	32' KB @ 5187.0ft (Patt 326)
Well:	Billings 3C-18H	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
5,945.0	5.50	280.90	5,869.5	216.7	-883.4	-883.4	2.47	-2.13	
5,993.0	5.50	289.80	5,917.3	217.9	-887.8	-887.8	1.78	0.00	
6,040.0	5.40	303.90	5,964.1	219.9	-891.8	-891.8	2.85	-0.21	
6,087.0	6.40	329.80	6,010.8	223.4	-894.9	-894.9	5.99	2.13	
6,134.0	6.90	359.30	6,057.5	228.5	-896.3	-896.3	7.26	1.06	
6,182.0	7.80	30.10	6,105.1	234.2	-894.7	-894.7	8.31	1.87	
6,229.0	8.00	52.10	6,151.7	239.0	-890.5	-890.5	6.41	0.43	
6,276.0	8.30	77.40	6,198.2	241.7	-884.6	-884.6	7.60	0.64	
6,323.0	10.00	86.20	6,244.6	242.7	-877.2	-877.2	4.67	3.62	
6,371.0	13.40	88.30	6,291.6	243.2	-867.5	-867.5	7.14	7.08	
6,418.0	17.10	87.10	6,337.0	243.7	-855.2	-855.2	7.90	7.87	
6,465.0	20.50	87.40	6,381.5	244.4	-840.0	-840.0	7.24	7.23	
6,512.0	23.10	84.10	6,425.1	245.7	-822.6	-822.6	6.11	5.53	
6,560.0	25.20	82.50	6,468.9	248.0	-803.1	-803.1	4.58	4.37	
6,607.0	26.70	82.30	6,511.2	250.8	-782.8	-782.8	3.20	3.19	
6,655.0	29.60	82.50	6,553.5	253.7	-760.3	-760.3	6.04	6.04	
6,702.0	32.60	83.40	6,593.7	256.7	-736.2	-736.2	6.46	6.38	
6,749.0	34.60	87.80	6,632.9	258.7	-710.3	-710.3	6.70	4.26	
6,796.0	37.20	90.50	6,670.9	259.1	-682.8	-682.8	6.48	5.53	
6,844.0	39.80	90.50	6,708.5	258.8	-652.9	-652.9	5.42	5.42	
6,891.0	42.40	88.90	6,743.9	259.0	-622.0	-622.0	5.97	5.53	
6,938.0	45.20	88.40	6,777.8	259.8	-589.5	-589.5	6.00	5.96	
6,985.0	49.10	86.40	6,809.8	261.3	-555.1	-555.1	8.86	8.30	
7,033.0	51.90	86.30	6,840.3	263.7	-518.1	-518.1	5.84	5.83	
7,080.0	54.20	87.60	6,868.6	265.7	-480.6	-480.6	5.37	4.89	
7,128.0	56.70	89.10	6,895.8	266.8	-441.1	-441.1	5.81	5.21	
7,175.0	60.30	90.10	6,920.3	267.1	-401.0	-401.0	7.87	7.66	
7,222.0	65.00	91.50	6,941.9	266.5	-359.3	-359.3	10.34	10.00	
7,269.0	69.20	92.30	6,960.2	265.1	-316.0	-316.0	9.07	8.94	
7,317.0	72.70	91.60	6,975.9	263.5	-270.7	-270.7	7.42	7.29	
7,364.0	75.50	91.00	6,988.8	262.5	-225.5	-225.5	6.08	5.96	
7,411.0	77.80	91.30	6,999.6	261.6	-179.8	-179.8	4.93	4.89	
7,458.0	80.60	91.60	7,008.4	260.4	-133.6	-133.6	5.99	5.96	
7,505.0	85.30	90.70	7,014.2	259.5	-87.0	-87.0	10.18	10.00	
7,559.0	88.20	90.70	7,017.2	258.8	-33.1	-33.1	5.37	5.37	
7,651.0	88.90	91.00	7,019.6	257.5	58.8	58.8	0.83	0.76	
7,743.0	88.10	89.70	7,022.0	256.9	150.8	150.8	1.66	-0.87	
7,835.0	88.90	89.20	7,024.4	257.8	242.8	242.8	1.03	0.87	
7,927.0	88.00	87.50	7,026.9	260.4	334.7	334.7	2.09	-0.98	
8,018.0	89.00	89.00	7,029.3	263.2	425.6	425.6	1.98	1.10	
8,110.0	87.00	88.70	7,032.5	265.0	517.5	517.5	2.20	-2.17	
8,203.0	86.70	88.40	7,037.6	267.4	610.4	610.4	0.46	-0.32	
8,294.0	87.30	89.60	7,042.3	269.0	701.2	701.2	1.47	0.66	
8,387.0	88.50	89.80	7,045.7	269.5	794.2	794.2	1.31	1.29	
8,479.0	90.40	90.90	7,046.6	268.9	886.1	886.1	2.39	2.07	
8,572.0	90.30	90.60	7,046.1	267.7	979.1	979.1	0.34	-0.11	
8,666.0	89.80	90.60	7,046.0	266.7	1,073.1	1,073.1	0.53	-0.53	
8,761.0	90.00	90.80	7,046.1	265.5	1,168.1	1,168.1	0.30	0.21	
8,855.0	89.60	90.10	7,046.5	264.8	1,262.1	1,262.1	0.86	-0.43	
8,950.0	88.70	89.20	7,047.9	265.4	1,357.1	1,357.1	1.34	-0.95	
9,044.0	89.90	89.00	7,049.0	266.9	1,451.1	1,451.1	1.29	1.28	
9,139.0	90.30	89.10	7,048.9	268.4	1,546.1	1,546.1	0.43	0.42	
9,233.0	91.20	88.60	7,047.6	270.3	1,640.0	1,640.0	1.10	0.96	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 3C-18H
Project:	DJ Wattenberg	TD Reference:	32' KB @ 5187.0ft (Patt 326)
Site:	S18-T3N-R68W (Billings)	MD Reference:	32' KB @ 5187.0ft (Patt 326)
Well:	Billings 3C-18H	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
9,328.0	90.70	89.40	7,046.1	272.0	1,735.0	1,735.0	0.99	-0.53	
9,422.0	90.50	90.00	7,045.1	272.5	1,829.0	1,829.0	0.67	-0.21	
9,517.0	86.60	89.40	7,047.5	273.0	1,924.0	1,924.0	4.15	-4.11	
9,611.0	87.70	89.10	7,052.2	274.2	2,017.8	2,017.8	1.21	1.17	
9,706.0	87.80	89.80	7,055.9	275.1	2,112.8	2,112.8	0.74	0.11	
9,800.0	89.40	89.90	7,058.2	275.4	2,206.7	2,206.7	1.71	1.70	
9,895.0	90.00	90.30	7,058.7	275.2	2,301.7	2,301.7	0.76	0.63	
9,990.0	89.70	90.90	7,058.9	274.2	2,396.7	2,396.7	0.71	-0.32	
10,084.0	88.70	91.90	7,060.2	271.9	2,490.7	2,490.7	1.50	-1.06	
10,179.0	88.90	92.10	7,062.2	268.6	2,585.6	2,585.6	0.30	0.21	
10,273.0	88.80	92.00	7,064.1	265.2	2,679.5	2,679.5	0.15	-0.11	
10,368.0	89.50	91.30	7,065.5	262.5	2,774.5	2,774.5	1.04	0.74	
10,462.0	89.20	90.50	7,066.6	261.0	2,868.4	2,868.4	0.91	-0.32	
10,557.0	88.40	89.50	7,068.6	261.0	2,963.4	2,963.4	1.35	-0.84	
10,651.0	89.40	89.70	7,070.4	261.7	3,057.4	3,057.4	1.08	1.06	
10,746.0	89.40	90.30	7,071.4	261.7	3,152.4	3,152.4	0.63	0.00	
10,840.0	88.90	90.20	7,072.8	261.3	3,246.4	3,246.4	0.54	-0.53	
10,935.0	89.50	89.80	7,074.1	261.3	3,341.4	3,341.4	0.76	0.63	
11,029.0	89.60	89.80	7,074.8	261.6	3,435.4	3,435.4	0.11	0.11	
11,124.0	89.40	89.50	7,075.7	262.2	3,530.4	3,530.4	0.38	-0.21	
11,218.0	89.50	89.30	7,076.6	263.1	3,624.4	3,624.4	0.24	0.11	
11,313.0	89.10	89.10	7,077.7	264.5	3,719.3	3,719.3	0.47	-0.42	
11,407.0	88.90	88.80	7,079.4	266.2	3,813.3	3,813.3	0.38	-0.21	
11,502.0	89.10	90.70	7,081.0	266.6	3,908.3	3,908.3	2.01	0.21	
11,596.0	90.00	91.30	7,081.8	265.0	4,002.3	4,002.3	1.15	0.96	
11,691.0	89.50	91.80	7,082.2	262.4	4,097.2	4,097.2	0.74	-0.53	
11,785.0	89.00	91.60	7,083.4	259.6	4,191.2	4,191.2	0.57	-0.53	
11,880.0	88.90	91.30	7,085.2	257.2	4,286.1	4,286.1	0.33	-0.11	
11,974.0	88.70	91.00	7,087.1	255.3	4,380.1	4,380.1	0.38	-0.21	
12,069.0	88.90	91.90	7,089.1	252.9	4,475.0	4,475.0	0.97	0.21	
12,163.0	88.20	90.60	7,091.5	250.9	4,569.0	4,569.0	1.57	-0.74	
12,258.0	87.40	89.80	7,095.1	250.5	4,663.9	4,663.9	1.19	-0.84	
12,352.0	88.00	88.60	7,098.9	251.8	4,757.8	4,757.8	1.43	0.64	
12,447.0	87.70	87.80	7,102.5	254.8	4,852.7	4,852.7	0.90	-0.32	
12,541.0	88.70	87.30	7,105.4	258.8	4,946.6	4,946.6	1.19	1.06	
12,636.0	87.70	89.10	7,108.4	261.8	5,041.5	5,041.5	2.17	-1.05	
12,730.0	89.10	88.70	7,111.0	263.6	5,135.4	5,135.4	1.55	1.49	
12,825.0	89.90	88.50	7,111.9	266.0	5,230.4	5,230.4	0.87	0.84	
12,919.0	90.40	89.60	7,111.6	267.5	5,324.4	5,324.4	1.29	0.53	
13,014.0	90.30	89.50	7,111.0	268.3	5,419.4	5,419.4	0.15	-0.11	
13,108.0	89.80	89.20	7,111.0	269.3	5,513.4	5,513.4	0.62	-0.53	
13,203.0	90.10	88.90	7,111.0	270.9	5,608.4	5,608.4	0.45	0.32	
13,297.0	90.10	91.60	7,110.9	270.5	5,702.3	5,702.3	2.87	0.00	
13,392.0	90.50	91.20	7,110.4	268.2	5,797.3	5,797.3	0.60	0.42	
13,486.0	89.50	91.00	7,110.4	266.4	5,891.3	5,891.3	1.08	-1.06	
13,581.0	86.70	89.40	7,113.5	266.0	5,986.2	5,986.2	3.39	-2.95	
13,675.0	88.80	89.70	7,117.2	266.8	6,080.2	6,080.2	2.26	2.23	
13,770.0	88.80	89.10	7,119.2	267.8	6,175.1	6,175.1	0.63	0.00	
13,864.0	88.70	88.40	7,121.3	269.8	6,269.1	6,269.1	0.75	-0.11	
13,959.0	88.00	87.30	7,124.0	273.4	6,364.0	6,364.0	1.37	-0.74	
13,975.0	87.90	87.40	7,124.6	274.1	6,379.9	6,379.9	0.88	-0.62	Last CES Survey @ 13,975' MD
14,025.0	87.90	87.40	7,126.4	276.4	6,429.9	6,429.9	0.00	0.00	PTB @ 14,025'

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Billings 3C-18H
Project: DJ Wattenberg	TVD Reference: 32' KB @ 5187.0ft (Patt 326)
Site: S18-T3N-R68W (Billings)	MD Reference: 32' KB @ 5187.0ft (Patt 326)
Well: Billings 3C-18H	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 - Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Billings 3C-18H PBHL 2 - survey misses target center by 210.6ft at 14025.0ft MD (7126.4 TVD, 276.4 N, 6429.9 E) - Point	0.00	0.00	7,330.0	266.8	6,482.8	1,324,581.53	3,131,658.36	40.223406	-105.028525
Billings 3C-18H 11,900' - survey misses target center by 5.2ft at 11698.9ft MD (7082.3 TVD, 262.2 N, 4105.2 E) - Point	0.00	0.00	7,080.0	266.8	4,105.3	1,324,569.56	3,129,280.97	40.223408	-105.037039
Billings 3C-18H PBHL 4 - survey misses target center by 53.9ft at 14025.0ft MD (7126.4 TVD, 276.4 N, 6429.9 E) - Point	0.00	0.00	7,130.0	266.8	6,482.8	1,324,581.53	3,131,658.36	40.223406	-105.028525
Billings 3C-18H TGT - survey misses target center by 12.2ft at 6979.5ft MD (6806.2 TVD, 261.1 N, -559.2 E) - Point	0.00	0.00	6,815.0	258.7	-567.2	1,324,537.81	3,124,608.49	40.223386	-105.053772
Billings 3C-18H PBHL - survey misses target center by 238.4ft at 14025.0ft MD (7126.4 TVD, 276.4 N, 6429.9 E) - Point	0.00	0.00	7,359.0	268.2	6,481.4	1,324,582.98	3,131,656.95	40.223410	-105.028530

Survey Annotations					
	Measured	Vertical	Local Coordinates		Comment
	Depth	Depth	+N/-S	+E/-W	
	(ft)	(ft)	(ft)	(ft)	
	13,975.0	7,124.6	274.1	6,379.9	Last CES Survey @ 13,975' MD
	14,025.0	7,126.4	276.4	6,429.9	PTB @ 14,025'

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S18-T3N-R68W (Billings)

Billings 3C-18H

Hz

Survey: Survey #1

Survey Report - Geographic

10 November, 2014

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 3C-18H
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5187.0ft (Patt 326)
Site:	S18-T3N-R68W (Billings)	MD Reference:	32' KB @ 5187.0ft (Patt 326)
Well:	Billings 3C-18H	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	S18-T3N-R68W (Billings)				
Site Position:		Northing:	1,326,724.18 ft	Latitude:	40.229390
From:	Lat/Long	Easting:	3,124,452.97 ft	Longitude:	-105.054290
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.29 °

Well	Billings 3C-18H					
Well Position	+N/-S	0.0 ft	Northing:	1,324,281.97 ft	Latitude:	40.222676
	+E/-W	0.0 ft	Easting:	3,125,177.04 ft	Longitude:	-105.051741
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,155.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/1/2014	8.55	66.74	52,649

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	90.00	

Survey Program	Date	11/10/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
240.0	14,025.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,324,281.97	3,125,177.04	40.222676	-105.051741	
240.0	0.80	342.70	240.0	1.6	-0.5	1,324,283.57	3,125,176.53	40.222680	-105.051743	
287.0	1.50	300.00	287.0	2.2	-1.1	1,324,284.19	3,125,175.90	40.222682	-105.051745	
334.0	2.40	283.40	334.0	2.8	-2.6	1,324,284.71	3,125,174.40	40.222684	-105.051751	
381.0	3.30	279.30	380.9	3.2	-4.9	1,324,285.15	3,125,172.11	40.222685	-105.051759	
429.0	4.20	281.50	428.8	3.8	-8.0	1,324,285.71	3,125,169.02	40.222686	-105.051770	
524.0	6.10	280.60	523.4	5.4	-16.4	1,324,287.29	3,125,160.64	40.222691	-105.051800	
619.0	7.20	285.60	617.8	7.9	-27.1	1,324,289.76	3,125,149.93	40.222698	-105.051838	
714.0	9.00	286.50	711.8	11.6	-39.9	1,324,293.41	3,125,137.06	40.222708	-105.051884	
808.0	9.90	281.60	804.5	15.4	-54.9	1,324,297.05	3,125,122.07	40.222718	-105.051938	
840.0	10.00	279.20	836.1	16.4	-60.3	1,324,298.02	3,125,116.63	40.222721	-105.051957	
925.0	9.50	276.00	919.8	18.3	-74.6	1,324,299.86	3,125,102.36	40.222726	-105.052008	

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 3C-18H
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5187.0ft (Patt 326)
Site:	S18-T3N-R68W (Billings)	MD Reference:	32' KB @ 5187.0ft (Patt 326)
Well:	Billings 3C-18H	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)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
1,020.0	9.80	284.80	1,013.5	21.1	-90.2	1,324,302.66	3,125,086.73	40.222734	-105.052064	
1,111.0	10.10	281.30	1,103.1	24.7	-105.5	1,324,306.13	3,125,071.40	40.222744	-105.052119	
1,203.0	10.20	279.50	1,193.7	27.6	-121.5	1,324,308.97	3,125,055.44	40.222752	-105.052176	
1,295.0	9.10	285.40	1,284.4	30.9	-136.5	1,324,312.17	3,125,040.37	40.222761	-105.052230	
1,387.0	9.30	283.10	1,375.2	34.5	-150.8	1,324,315.72	3,125,026.10	40.222771	-105.052281	
1,479.0	8.90	289.40	1,466.0	38.6	-164.7	1,324,319.70	3,125,012.13	40.222782	-105.052331	
1,571.0	9.20	289.40	1,556.9	43.4	-178.4	1,324,324.43	3,124,998.45	40.222795	-105.052380	
1,663.0	9.20	287.30	1,647.7	48.0	-192.3	1,324,328.99	3,124,984.47	40.222808	-105.052430	
1,755.0	9.10	284.90	1,738.5	52.1	-206.4	1,324,332.98	3,124,970.40	40.222819	-105.052480	
1,847.0	8.90	282.90	1,829.4	55.5	-220.3	1,324,336.37	3,124,956.41	40.222828	-105.052530	
1,939.0	9.80	285.20	1,920.2	59.2	-234.8	1,324,339.94	3,124,941.90	40.222838	-105.052582	
2,031.0	9.50	284.00	2,010.9	63.0	-249.8	1,324,343.75	3,124,926.96	40.222849	-105.052636	
2,123.0	9.30	285.10	2,101.7	66.8	-264.3	1,324,347.45	3,124,912.40	40.222859	-105.052688	
2,215.0	11.20	286.90	2,192.2	71.4	-280.0	1,324,351.91	3,124,896.65	40.222872	-105.052744	
2,307.0	10.90	285.80	2,282.5	76.3	-297.0	1,324,356.79	3,124,879.70	40.222886	-105.052805	
2,400.0	10.50	284.20	2,373.9	80.8	-313.6	1,324,361.17	3,124,863.01	40.222898	-105.052864	
2,494.0	10.20	284.80	2,466.3	85.0	-330.0	1,324,365.32	3,124,846.63	40.222909	-105.052923	
2,589.0	9.70	283.20	2,559.9	89.0	-345.9	1,324,369.22	3,124,830.69	40.222920	-105.052980	
2,683.0	9.10	283.50	2,652.6	92.5	-360.8	1,324,372.68	3,124,815.73	40.222930	-105.053033	
2,778.0	8.50	282.40	2,746.5	95.8	-375.0	1,324,375.87	3,124,801.56	40.222939	-105.053084	
2,872.0	10.00	285.60	2,839.3	99.5	-389.6	1,324,379.49	3,124,786.89	40.222949	-105.053137	
2,967.0	9.40	284.40	2,932.9	103.6	-405.1	1,324,383.55	3,124,771.41	40.222961	-105.053192	
3,061.0	8.60	283.60	3,025.8	107.2	-419.4	1,324,387.04	3,124,757.13	40.222970	-105.053243	
3,156.0	9.30	278.90	3,119.6	110.1	-433.9	1,324,389.83	3,124,742.62	40.222978	-105.053295	
3,251.0	10.00	287.00	3,213.3	113.7	-449.3	1,324,393.35	3,124,727.13	40.222988	-105.053350	
3,345.0	11.60	285.80	3,305.6	118.6	-466.2	1,324,398.22	3,124,710.21	40.223002	-105.053411	
3,439.0	11.10	283.90	3,397.8	123.4	-484.1	1,324,402.88	3,124,692.31	40.223015	-105.053475	
3,534.0	11.20	284.20	3,491.0	127.8	-501.9	1,324,407.25	3,124,674.47	40.223027	-105.053539	
3,628.0	11.10	283.10	3,583.2	132.1	-519.6	1,324,411.45	3,124,656.78	40.223039	-105.053602	
3,723.0	10.50	281.50	3,676.5	135.9	-537.0	1,324,415.16	3,124,639.37	40.223049	-105.053664	
3,817.0	9.40	279.40	3,769.1	138.9	-553.0	1,324,418.04	3,124,623.39	40.223057	-105.053721	
3,912.0	8.70	278.50	3,862.9	141.2	-567.7	1,324,420.30	3,124,608.62	40.223064	-105.053774	
4,007.0	11.20	287.80	3,956.5	145.1	-583.6	1,324,424.10	3,124,592.71	40.223074	-105.053831	
4,101.0	10.90	287.40	4,048.8	150.5	-600.8	1,324,429.46	3,124,575.51	40.223089	-105.053893	
4,196.0	9.90	286.40	4,142.2	155.5	-617.2	1,324,434.37	3,124,559.07	40.223103	-105.053952	
4,290.0	9.50	282.50	4,234.8	159.5	-632.5	1,324,438.25	3,124,543.73	40.223114	-105.054006	
4,385.0	9.40	283.60	4,328.6	163.0	-647.7	1,324,441.70	3,124,528.52	40.223123	-105.054061	
4,479.0	9.20	283.90	4,421.3	166.6	-662.5	1,324,445.23	3,124,513.74	40.223133	-105.054114	
4,574.0	9.00	283.20	4,515.1	170.1	-677.1	1,324,448.68	3,124,499.12	40.223143	-105.054166	
4,668.0	8.50	282.30	4,608.0	173.3	-691.0	1,324,451.77	3,124,485.16	40.223152	-105.054216	
4,763.0	9.80	286.80	4,701.8	177.1	-705.6	1,324,455.53	3,124,470.54	40.223162	-105.054268	
4,857.0	9.10	285.80	4,794.5	181.5	-720.4	1,324,459.79	3,124,455.71	40.223174	-105.054321	
4,952.0	8.40	284.60	4,888.4	185.3	-734.4	1,324,463.51	3,124,441.74	40.223185	-105.054371	
5,046.0	10.20	285.30	4,981.2	189.2	-749.0	1,324,467.37	3,124,427.05	40.223195	-105.054424	
5,141.0	9.50	284.10	5,074.8	193.3	-764.8	1,324,471.42	3,124,411.31	40.223207	-105.054480	
5,236.0	8.50	282.30	5,168.6	196.7	-779.2	1,324,474.75	3,124,396.83	40.223216	-105.054532	
5,330.0	10.50	282.90	5,261.3	200.1	-794.4	1,324,478.06	3,124,381.68	40.223225	-105.054586	
5,425.0	9.20	277.00	5,354.9	203.0	-810.3	1,324,480.84	3,124,366.69	40.223233	-105.054643	
5,519.0	8.10	276.10	5,447.9	204.6	-824.4	1,324,482.39	3,124,351.63	40.223238	-105.054694	
5,614.0	9.80	287.00	5,541.7	207.7	-838.8	1,324,485.39	3,124,337.23	40.223246	-105.054745	
5,709.0	8.70	283.60	5,635.5	211.7	-853.5	1,324,489.37	3,124,322.49	40.223257	-105.054798	
5,803.0	7.90	279.90	5,728.5	214.5	-866.8	1,324,492.09	3,124,309.21	40.223265	-105.054845	
5,850.0	7.20	277.10	5,775.1	215.4	-872.9	1,324,492.98	3,124,303.10	40.223267	-105.054867	
5,898.0	6.50	275.20	5,822.7	216.0	-878.6	1,324,493.57	3,124,297.40	40.223269	-105.054888	
5,945.0	5.50	280.90	5,869.5	216.7	-883.4	1,324,494.21	3,124,292.54	40.223271	-105.054905	

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 3C-18H
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5187.0ft (Patt 326)
Site:	S18-T3N-R68W (Billings)	MD Reference:	32' KB @ 5187.0ft (Patt 326)
Well:	Billings 3C-18H	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)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
5,993.0	5.50	289.80	5,917.3	217.9	-887.8	1,324,495.40	3,124,288.11	40.223274	-105.054921	
6,040.0	5.40	303.90	5,964.1	219.9	-891.8	1,324,497.38	3,124,284.14	40.223280	-105.054935	
6,087.0	6.40	329.80	6,010.8	223.4	-894.9	1,324,500.86	3,124,280.97	40.223289	-105.054946	
6,134.0	6.90	359.30	6,057.5	228.5	-896.3	1,324,505.94	3,124,279.59	40.223303	-105.054951	
6,182.0	7.80	30.10	6,105.1	234.2	-894.7	1,324,511.65	3,124,281.16	40.223319	-105.054945	
6,229.0	8.00	52.10	6,151.7	239.0	-890.5	1,324,516.44	3,124,285.32	40.223332	-105.054930	
6,276.0	8.30	77.40	6,198.2	241.7	-884.6	1,324,519.22	3,124,291.20	40.223340	-105.054909	
6,323.0	10.00	86.20	6,244.6	242.7	-877.2	1,324,520.27	3,124,298.58	40.223342	-105.054883	
6,371.0	13.40	88.30	6,291.6	243.2	-867.5	1,324,520.76	3,124,308.30	40.223344	-105.054848	
6,418.0	17.10	87.10	6,337.0	243.7	-855.2	1,324,521.33	3,124,320.64	40.223345	-105.054804	
6,465.0	20.50	87.40	6,381.5	244.4	-840.0	1,324,522.13	3,124,335.77	40.223347	-105.054750	
6,512.0	23.10	84.10	6,425.1	245.7	-822.6	1,324,523.54	3,124,353.16	40.223351	-105.054687	
6,560.0	25.20	82.50	6,468.9	248.0	-803.1	1,324,525.94	3,124,372.64	40.223357	-105.054617	
6,607.0	26.70	82.30	6,511.2	250.8	-782.8	1,324,528.77	3,124,393.01	40.223364	-105.054544	
6,655.0	29.60	82.50	6,553.5	253.7	-760.3	1,324,531.87	3,124,415.44	40.223373	-105.054464	
6,702.0	32.60	83.40	6,593.7	256.7	-736.2	1,324,534.97	3,124,439.52	40.223381	-105.054378	
6,749.0	34.60	87.80	6,632.9	258.7	-710.3	1,324,537.07	3,124,465.43	40.223386	-105.054285	
6,796.0	37.20	90.50	6,670.9	259.1	-682.8	1,324,537.59	3,124,492.97	40.223387	-105.054186	
6,844.0	39.80	90.50	6,708.5	258.8	-652.9	1,324,537.48	3,124,522.85	40.223387	-105.054079	
6,891.0	42.40	88.90	6,743.9	259.0	-622.0	1,324,537.81	3,124,553.74	40.223387	-105.053969	
6,938.0	45.20	88.40	6,777.8	259.8	-589.5	1,324,538.75	3,124,586.26	40.223389	-105.053852	
6,985.0	49.10	86.40	6,809.8	261.3	-555.1	1,324,540.50	3,124,620.66	40.223393	-105.053729	
7,033.0	51.90	86.30	6,840.3	263.7	-518.1	1,324,543.05	3,124,657.61	40.223400	-105.053597	
7,080.0	54.20	87.60	6,868.6	265.7	-480.6	1,324,545.23	3,124,695.10	40.223405	-105.053462	
7,128.0	56.70	89.10	6,895.8	266.8	-441.1	1,324,546.56	3,124,734.61	40.223408	-105.053321	
7,175.0	60.30	90.10	6,920.3	267.1	-401.0	1,324,547.03	3,124,774.67	40.223409	-105.053177	
7,222.0	65.00	91.50	6,941.9	266.5	-359.3	1,324,546.65	3,124,816.40	40.223408	-105.053028	
7,269.0	69.20	92.30	6,960.2	265.1	-316.0	1,324,545.43	3,124,859.67	40.223404	-105.052873	
7,317.0	72.70	91.60	6,975.9	263.5	-270.7	1,324,544.12	3,124,905.01	40.223399	-105.052711	
7,364.0	75.50	91.00	6,988.8	262.5	-225.5	1,324,543.32	3,124,950.20	40.223397	-105.052549	
7,411.0	77.80	91.30	6,999.6	261.6	-179.8	1,324,542.64	3,124,995.93	40.223394	-105.052385	
7,458.0	80.60	91.60	7,008.4	260.4	-133.6	1,324,541.70	3,125,042.08	40.223391	-105.052220	
7,505.0	85.30	90.70	7,014.2	259.5	-87.0	1,324,541.00	3,125,088.70	40.223388	-105.052053	
7,559.0	88.20	90.70	7,017.2	258.8	-33.1	1,324,540.62	3,125,142.61	40.223387	-105.051860	
7,651.0	88.90	91.00	7,019.6	257.5	58.8	1,324,539.72	3,125,234.58	40.223383	-105.051531	
7,743.0	88.10	89.70	7,022.0	256.9	150.8	1,324,539.62	3,125,326.54	40.223381	-105.051201	
7,835.0	88.90	89.20	7,024.4	257.8	242.8	1,324,540.97	3,125,418.50	40.223384	-105.050872	
7,927.0	88.00	87.50	7,026.9	260.4	334.7	1,324,544.08	3,125,510.41	40.223391	-105.050543	
8,018.0	89.00	89.00	7,029.3	263.2	425.6	1,324,547.32	3,125,601.32	40.223399	-105.050217	
8,110.0	87.00	88.70	7,032.5	265.0	517.5	1,324,549.63	3,125,693.23	40.223404	-105.049888	
8,203.0	86.70	88.40	7,037.6	267.4	610.4	1,324,552.45	3,125,786.04	40.223410	-105.049555	
8,294.0	87.30	89.60	7,042.3	269.0	701.2	1,324,554.49	3,125,876.89	40.223414	-105.049230	
8,387.0	88.50	89.80	7,045.7	269.5	794.2	1,324,555.45	3,125,969.82	40.223416	-105.048897	
8,479.0	90.40	90.90	7,046.6	268.9	886.1	1,324,555.35	3,126,061.81	40.223414	-105.048568	
8,572.0	90.30	90.60	7,046.1	267.7	979.1	1,324,554.60	3,126,154.81	40.223411	-105.048235	
8,666.0	89.80	90.60	7,046.0	266.7	1,073.1	1,324,554.09	3,126,248.81	40.223408	-105.047898	
8,761.0	90.00	90.80	7,046.1	265.5	1,168.1	1,324,553.41	3,126,343.80	40.223405	-105.047558	
8,855.0	89.60	90.10	7,046.5	264.8	1,262.1	1,324,553.15	3,126,437.80	40.223403	-105.047221	
8,950.0	88.70	89.20	7,047.9	265.4	1,357.1	1,324,554.21	3,126,532.78	40.223404	-105.046881	
9,044.0	89.90	89.00	7,049.0	266.9	1,451.1	1,324,556.16	3,126,626.76	40.223408	-105.046545	
9,139.0	90.30	89.10	7,048.9	268.4	1,546.1	1,324,558.22	3,126,721.73	40.223413	-105.046204	
9,233.0	91.20	88.60	7,047.6	270.3	1,640.0	1,324,560.58	3,126,815.69	40.223418	-105.045868	
9,328.0	90.70	89.40	7,046.1	272.0	1,735.0	1,324,562.72	3,126,910.66	40.223422	-105.045528	
9,422.0	90.50	90.00	7,045.1	272.5	1,829.0	1,324,563.68	3,127,004.65	40.223424	-105.045191	
9,517.0	86.60	89.40	7,047.5	273.0	1,924.0	1,324,564.66	3,127,099.59	40.223425	-105.044851	

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 3C-18H
Project:	DJ Wattenberg	TVD Reference:	32' KB @ 5187.0ft (Patt 326)
Site:	S18-T3N-R68W (Billings)	MD Reference:	32' KB @ 5187.0ft (Patt 326)
Well:	Billings 3C-18H	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)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
9,611.0	87.70	89.10	7,052.2	274.2	2,017.8	1,324,566.36	3,127,193.46	40.223429	-105.044515	
9,706.0	87.80	89.80	7,055.9	275.1	2,112.8	1,324,567.76	3,127,288.37	40.223431	-105.044175	
9,800.0	89.40	89.90	7,058.2	275.4	2,206.7	1,324,568.48	3,127,382.34	40.223432	-105.043839	
9,895.0	90.00	90.30	7,058.7	275.2	2,301.7	1,324,568.79	3,127,477.34	40.223431	-105.043498	
9,990.0	89.70	90.90	7,058.9	274.2	2,396.7	1,324,568.28	3,127,572.34	40.223428	-105.043158	
10,084.0	88.70	91.90	7,060.2	271.9	2,490.7	1,324,566.45	3,127,666.31	40.223422	-105.042822	
10,179.0	88.90	92.10	7,062.2	268.6	2,585.6	1,324,563.62	3,127,761.24	40.223413	-105.042482	
10,273.0	88.80	92.00	7,064.1	265.2	2,679.5	1,324,560.73	3,127,855.18	40.223404	-105.042145	
10,368.0	89.50	91.30	7,065.5	262.5	2,774.5	1,324,558.48	3,127,950.14	40.223396	-105.041805	
10,462.0	89.20	90.50	7,066.6	261.0	2,868.4	1,324,557.48	3,128,044.13	40.223392	-105.041469	
10,557.0	88.40	89.50	7,068.6	261.0	2,963.4	1,324,557.96	3,128,139.10	40.223392	-105.041129	
10,651.0	89.40	89.70	7,070.4	261.7	3,057.4	1,324,559.09	3,128,233.08	40.223394	-105.040792	
10,746.0	89.40	90.30	7,071.4	261.7	3,152.4	1,324,559.57	3,128,328.07	40.223394	-105.040452	
10,840.0	88.90	90.20	7,072.8	261.3	3,246.4	1,324,559.63	3,128,422.06	40.223393	-105.040115	
10,935.0	89.50	89.80	7,074.1	261.3	3,341.4	1,324,560.11	3,128,517.05	40.223393	-105.039775	
11,029.0	89.60	89.80	7,074.8	261.6	3,435.4	1,324,560.92	3,128,611.04	40.223393	-105.039439	
11,124.0	89.40	89.50	7,075.7	262.2	3,530.4	1,324,561.98	3,128,706.03	40.223395	-105.039098	
11,218.0	89.50	89.30	7,076.6	263.1	3,624.4	1,324,563.44	3,128,800.02	40.223398	-105.038762	
11,313.0	89.10	89.10	7,077.7	264.5	3,719.3	1,324,565.24	3,128,894.99	40.223401	-105.038422	
11,407.0	88.90	88.80	7,079.4	266.2	3,813.3	1,324,567.44	3,128,988.95	40.223406	-105.038085	
11,502.0	89.10	90.70	7,081.0	266.6	3,908.3	1,324,568.33	3,129,083.93	40.223407	-105.037745	
11,596.0	90.00	91.30	7,081.8	265.0	4,002.3	1,324,567.17	3,129,177.92	40.223403	-105.037408	
11,691.0	89.50	91.80	7,082.2	262.4	4,097.2	1,324,565.08	3,129,272.90	40.223395	-105.037068	
11,785.0	89.00	91.60	7,083.4	259.6	4,191.2	1,324,562.77	3,129,366.86	40.223388	-105.036732	
11,880.0	88.90	91.30	7,085.2	257.2	4,286.1	1,324,560.84	3,129,461.82	40.223381	-105.036392	
11,974.0	88.70	91.00	7,087.1	255.3	4,380.1	1,324,559.43	3,129,555.79	40.223376	-105.036055	
12,069.0	88.90	91.90	7,089.1	252.9	4,475.0	1,324,557.51	3,129,650.75	40.223369	-105.035715	
12,163.0	88.20	90.60	7,091.5	250.9	4,569.0	1,324,555.93	3,129,744.70	40.223364	-105.035379	
12,258.0	87.40	89.80	7,095.1	250.5	4,663.9	1,324,556.08	3,129,839.63	40.223363	-105.035039	
12,352.0	88.00	88.60	7,098.9	251.8	4,757.8	1,324,557.87	3,129,933.54	40.223366	-105.034703	
12,447.0	87.70	87.80	7,102.5	254.8	4,852.7	1,324,561.33	3,130,028.41	40.223374	-105.034363	
12,541.0	88.70	87.30	7,105.4	258.8	4,946.6	1,324,565.82	3,130,122.25	40.223385	-105.034027	
12,636.0	87.70	89.10	7,108.4	261.8	5,041.5	1,324,569.28	3,130,217.14	40.223393	-105.033687	
12,730.0	89.10	88.70	7,111.0	263.6	5,135.4	1,324,571.56	3,130,311.07	40.223398	-105.033350	
12,825.0	89.90	88.50	7,111.9	266.0	5,230.4	1,324,574.36	3,130,406.02	40.223405	-105.033010	
12,919.0	90.40	89.60	7,111.6	267.5	5,324.4	1,324,576.40	3,130,500.00	40.223409	-105.032674	
13,014.0	90.30	89.50	7,111.0	268.3	5,419.4	1,324,577.62	3,130,594.99	40.223411	-105.032333	
13,108.0	89.80	89.20	7,111.0	269.3	5,513.4	1,324,579.16	3,130,688.98	40.223414	-105.031997	
13,203.0	90.10	88.90	7,111.0	270.9	5,608.4	1,324,581.22	3,130,783.95	40.223418	-105.031657	
13,297.0	90.10	91.60	7,110.9	270.5	5,702.3	1,324,581.28	3,130,877.95	40.223417	-105.031320	
13,392.0	90.50	91.20	7,110.4	268.2	5,797.3	1,324,579.44	3,130,972.93	40.223410	-105.030980	
13,486.0	89.50	91.00	7,110.4	266.4	5,891.3	1,324,578.11	3,131,066.92	40.223405	-105.030643	
13,581.0	86.70	89.40	7,113.5	266.0	5,986.2	1,324,578.26	3,131,161.85	40.223404	-105.030303	
13,675.0	88.80	89.70	7,117.2	266.8	6,080.2	1,324,579.47	3,131,255.76	40.223406	-105.029967	
13,770.0	88.80	89.10	7,119.2	267.8	6,175.1	1,324,580.95	3,131,350.73	40.223409	-105.029627	
13,864.0	88.70	88.40	7,121.3	269.8	6,269.1	1,324,583.47	3,131,444.68	40.223415	-105.029290	
13,959.0	88.00	87.30	7,124.0	273.4	6,364.0	1,324,587.51	3,131,539.55	40.223424	-105.028951	
13,975.0	87.90	87.40	7,124.6	274.1	6,379.9	1,324,588.33	3,131,555.52	40.223426	-105.028893	
Last CES Survey @ 13,975' MD										
14,025.0	87.90	87.40	7,126.4	276.4	6,429.9	1,324,590.85	3,131,605.42	40.223432	-105.028715	
PTB @ 14,025'										

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Billings 3C-18H
Project: DJ Wattenberg	TVD Reference: 32' KB @ 5187.0ft (Patt 326)
Site: S18-T3N-R68W (Billings)	MD Reference: 32' KB @ 5187.0ft (Patt 326)
Well: Billings 3C-18H	North Reference: True
Wellbore: Hz	Survey Calculation Method: Minimum Curvature
Design: FINAL	Database: USA EDM 5000 Multi Users DB

Design 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									
Billings 3C-18H PBHL 4	0.00	0.00	7,130.0	266.8	6,482.8	1,324,581.53	3,131,658.36	40.223406	-105.028525
- survey misses target center by 53.9ft at 14025.0ft MD (7126.4 TVD, 276.4 N, 6429.9 E)									
- Point									

Survey Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)		
13,975.0	7,124.6	274.1	6,379.9	Last CES Survey @ 13,975' MD	
14,025.0	7,126.4	276.4	6,429.9	PTB @ 14,025'	

Checked By: _____ Approved By: _____ Date: _____