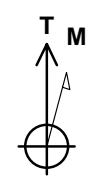
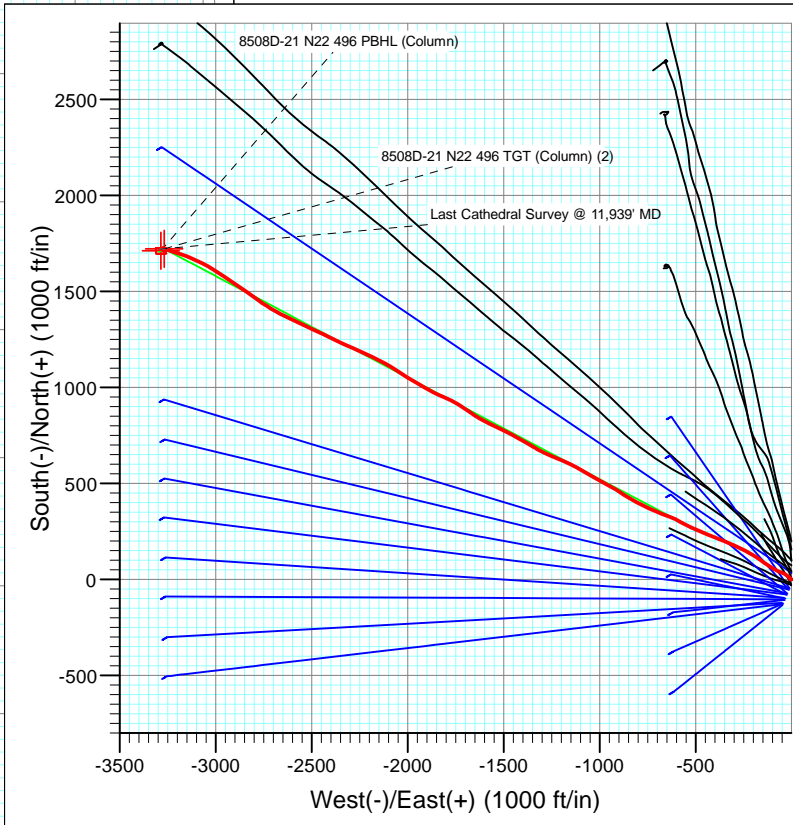
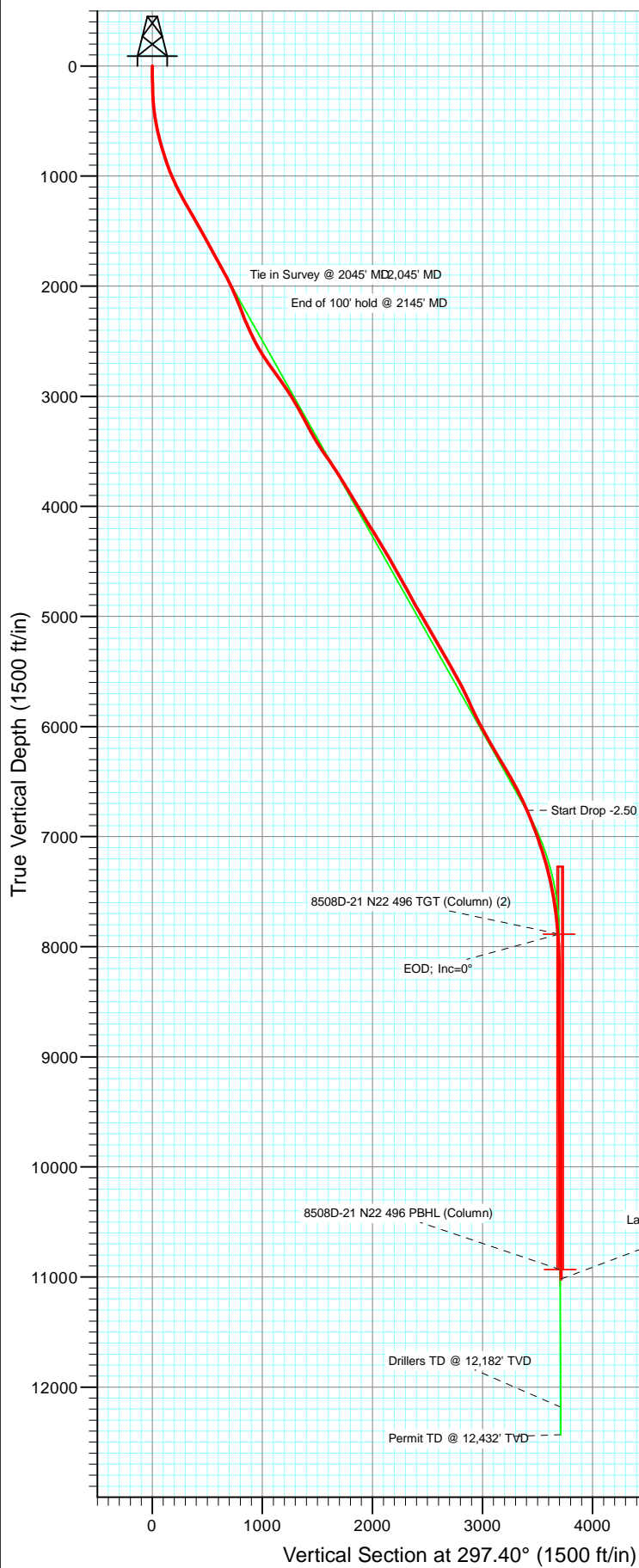


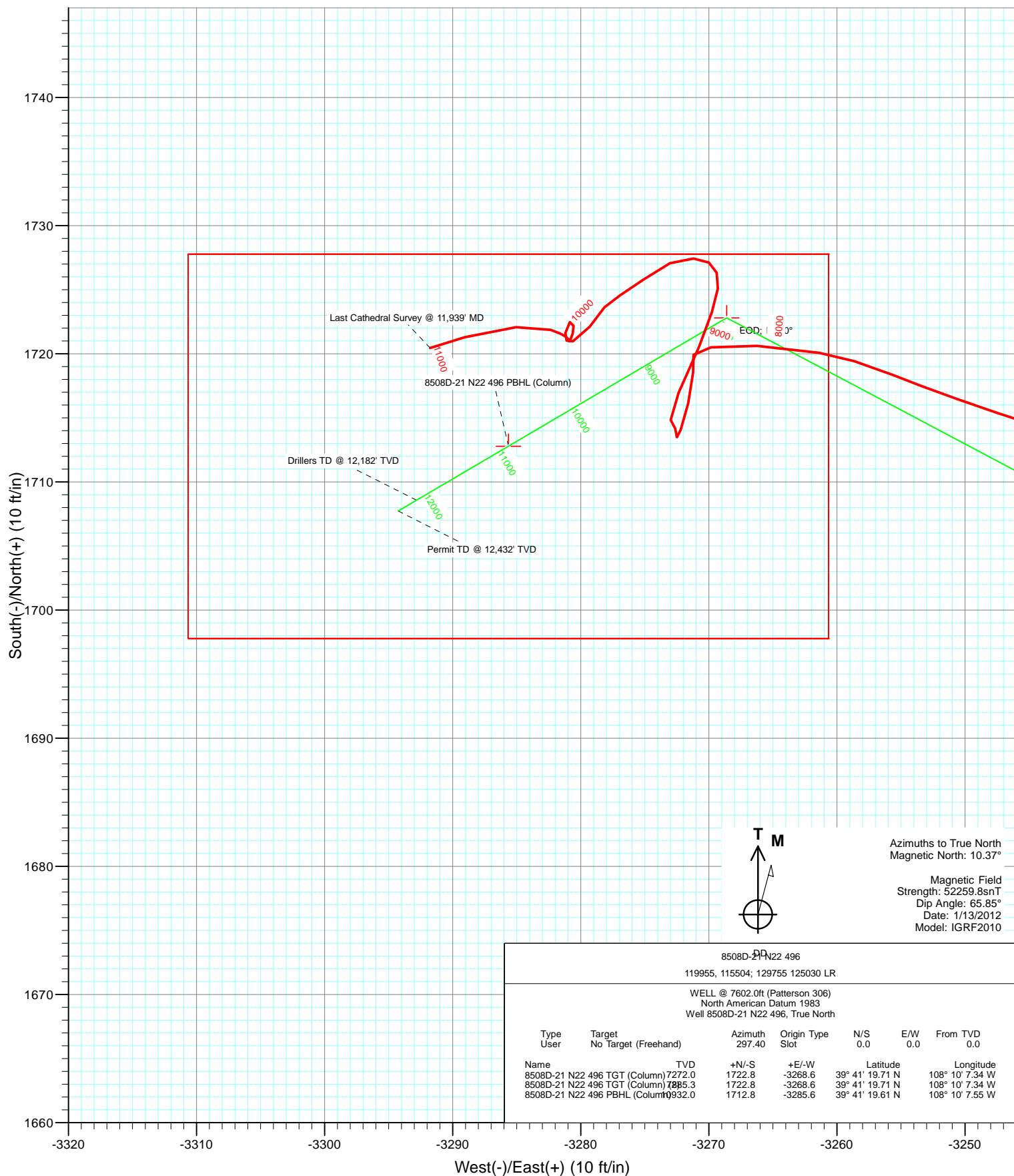


Project: Story Gulch
 Site: S22-T4S-R96W (N22 496) (Column Pattern)
 Well: 8508D-21 N22 496
 Wellbore: DD
 Design: Final Survey



Azimuths to True North
 Magnetic North: 10.37°
 Magnetic Field
 Strength: 52259.8nT
 Dip Angle: 65.85°
 Date: 1/13/2012
 Model: IGRF2010

Type	Target	Azimuth	Origin	Type	N/S	E/W	From
User	No Target (Freehand)	297.40	Slot		0.0	0.0	TVD
Name		TV					
8508D-21 N22 496 TGT (Column)	7272.0	1722.8	-3268.6	39° 41' 19.71 N	108° 10' 7.34 W		
8508D-21 N22 496 TGT (Column) (2)	7272.0	1722.8	-3268.6	39° 41' 19.71 N	108° 10' 7.34 W		
8508D-21 N22 496 PBHL (Column)	7272.0	1712.8	-3285.6	39° 41' 19.61 N	108° 10' 7.55 W		



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8508D-21 N22 496
Project:	Story Gulch	TVD Reference:	WELL @ 7602.0ft (Patterson 306)
Site:	S22-T4S-R96W (N22 496) (Column Pattern)	MD Reference:	WELL @ 7602.0ft (Patterson 306)
Well:	8508D-21 N22 496	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

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

Site		S22-T4S-R96W (N22 496) (Column Pattern)			
Site Position:		Northing:	1,685,048.56 ft	Latitude:	39° 41' 3.24 N
From:	Lat/Long	Easting:	2,252,316.79 ft	Longitude:	108° 9' 25.11 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.68 °

Well	8508D-21 N22 496					
Well Position	+N/-S	0.0 ft	Northing:	1,684,993.70 ft	Latitude:	39° 41' 2.69 N
	+E/-W	0.0 ft	Easting:	2,252,282.84 ft	Longitude:	108° 9' 25.52 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,569.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/13/2012	10.37	65.85	52,260

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	297.40	

Survey Program	Date	1/21/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
209.0	2,045.0	Survey #1 (DD)	MWD	Geolink MWD	
2,169.0	11,939.0	Survey #2 (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	
100.0	0.72	283.00	100.0	0.1	-0.6	0.6	0.72	0.72	
200.0	1.44	283.00	200.0	0.6	-2.4	2.4	0.72	0.72	
300.0	3.85	311.89	299.9	2.6	-5.8	6.4	2.68	2.41	
400.0	7.27	316.95	399.4	9.6	-12.6	15.6	3.46	3.42	
500.0	9.81	309.29	498.3	19.9	-23.5	30.0	2.77	2.54	
600.0	13.01	295.51	596.3	30.3	-40.0	49.5	4.18	3.20	
700.0	15.02	291.79	693.3	39.9	-62.4	73.7	2.20	2.01	
800.0	17.00	299.27	789.4	51.9	-87.1	101.2	2.85	1.98	
900.0	19.38	302.78	884.5	68.0	-113.7	132.2	2.63	2.39	
1,000.0	22.57	304.93	977.8	88.0	-143.4	167.8	3.28	3.19	
1,100.0	25.33	304.62	1,069.1	111.5	-176.6	208.1	2.76	2.76	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8508D-21 N22 496
Project:	Story Gulch	TVD Reference:	WELL @ 7602.0ft (Patterson 306)
Site:	S22-T4S-R96W (N22 496) (Column Pattern)	MD Reference:	WELL @ 7602.0ft (Patterson 306)
Well:	8508D-21 N22 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
1,200.0	28.09	299.97	1,158.5	135.7	-214.3	252.7	3.46	2.76	
1,300.0	29.52	295.34	1,245.8	158.1	-257.7	301.6	2.65	1.43	
1,400.0	29.53	293.18	1,332.9	178.1	-302.7	350.7	1.07	0.01	
1,500.0	30.05	292.95	1,419.7	197.4	-348.4	400.1	0.53	0.52	
1,600.0	28.94	292.09	1,506.5	216.5	-394.1	449.5	1.18	-1.10	
1,700.0	28.61	291.72	1,594.3	234.4	-438.6	497.3	0.38	-0.34	
1,800.0	28.89	293.27	1,682.0	252.7	-483.1	545.2	0.80	0.29	
1,900.0	28.66	296.44	1,769.6	272.9	-526.7	593.2	1.55	-0.23	
2,000.0	29.10	297.99	1,857.2	295.2	-569.6	641.6	0.87	0.44	
2,045.0	29.10	297.50	1,896.5	305.4	-589.0	663.4	0.53	0.00	Last Cathedral Survey @ 2,045' MD
2,100.0	26.88	294.45	1,945.1	316.7	-612.1	689.2	4.81	-4.04	
2,200.0	23.96	289.93	2,035.6	332.3	-651.5	731.4	3.50	-2.92	
2,300.0	22.45	291.43	2,127.4	346.1	-688.8	770.8	1.63	-1.51	
2,400.0	21.30	295.52	2,220.4	360.6	-722.5	807.4	1.91	-1.15	
2,500.0	23.17	296.14	2,313.2	377.4	-755.9	844.7	1.88	1.87	
2,600.0	24.20	295.79	2,404.5	395.0	-792.5	885.4	1.04	1.03	
2,700.0	27.25	299.28	2,494.9	414.6	-830.6	928.2	3.40	3.05	
2,800.0	31.42	303.55	2,582.1	440.1	-872.3	977.0	4.66	4.17	
2,900.0	33.28	301.13	2,666.4	469.1	-917.5	1,030.4	2.27	1.86	
3,000.0	35.91	298.35	2,748.7	497.1	-967.0	1,087.3	3.06	2.62	
3,100.0	35.82	299.26	2,829.6	525.3	-1,018.5	1,146.0	0.54	-0.08	
3,200.0	34.41	300.46	2,911.3	554.4	-1,068.3	1,203.6	1.57	-1.41	
3,300.0	31.80	297.95	2,995.0	581.1	-1,116.0	1,258.2	2.95	-2.61	
3,400.0	30.00	295.33	3,081.1	603.9	-1,161.5	1,309.1	2.24	-1.79	
3,500.0	28.84	293.17	3,168.0	624.2	-1,206.6	1,358.5	1.57	-1.16	
3,600.0	27.68	293.47	3,256.2	642.4	-1,250.0	1,405.4	1.18	-1.17	
3,700.0	29.34	296.23	3,344.4	662.2	-1,292.8	1,452.5	2.12	1.66	
3,800.0	32.22	300.16	3,430.3	686.3	-1,337.9	1,503.6	3.52	2.89	
3,900.0	33.62	299.23	3,514.1	713.6	-1,385.1	1,558.1	1.49	1.40	
4,000.0	35.09	299.09	3,596.7	741.1	-1,434.4	1,614.5	1.47	1.46	
4,100.0	33.52	297.78	3,679.2	768.0	-1,484.0	1,670.9	1.73	-1.56	
4,200.0	31.18	295.08	3,763.9	791.5	-1,531.8	1,724.2	2.75	-2.34	
4,300.0	30.90	296.35	3,849.7	813.6	-1,578.2	1,775.5	0.72	-0.28	
4,400.0	31.08	300.19	3,935.2	838.0	-1,623.8	1,827.3	1.98	0.18	
4,500.0	31.03	303.87	4,021.1	865.4	-1,667.1	1,878.3	1.90	-0.05	
4,600.0	31.55	303.80	4,106.5	894.8	-1,710.1	1,930.0	0.53	0.53	
4,700.0	32.22	298.15	4,191.5	922.4	-1,754.9	1,982.5	3.06	0.67	
4,800.0	31.62	294.39	4,276.1	945.5	-1,802.9	2,035.8	2.08	-0.60	
4,900.0	30.28	294.83	4,361.8	966.7	-1,849.8	2,087.1	1.36	-1.34	
5,000.0	30.75	300.43	4,448.1	989.9	-1,894.7	2,137.7	2.88	0.46	
5,100.0	29.70	299.63	4,534.5	1,015.2	-1,938.2	2,188.0	1.12	-1.04	
5,200.0	29.70	300.75	4,621.3	1,040.1	-1,981.1	2,237.6	0.55	0.00	
5,300.0	28.80	302.73	4,708.5	1,065.9	-2,022.7	2,286.3	1.32	-0.90	
5,400.0	28.50	302.76	4,796.5	1,091.8	-2,062.6	2,333.6	0.31	-0.31	
5,500.0	29.83	300.04	4,883.8	1,117.5	-2,104.0	2,382.3	1.88	1.33	
5,600.0	29.95	296.38	4,970.2	1,141.1	-2,148.4	2,432.5	1.83	0.13	
5,700.0	29.52	295.02	5,057.2	1,162.2	-2,193.0	2,481.8	0.80	-0.43	
5,800.0	30.89	295.04	5,143.8	1,183.3	-2,238.3	2,531.8	1.38	1.38	
5,900.0	30.11	294.49	5,229.6	1,205.0	-2,284.9	2,583.1	0.83	-0.78	
6,000.0	29.61	293.70	5,316.5	1,225.2	-2,330.2	2,632.6	0.63	-0.50	
6,100.0	29.31	295.32	5,403.5	1,245.5	-2,375.0	2,681.7	0.85	-0.30	
6,200.0	29.83	296.52	5,490.5	1,267.1	-2,419.4	2,731.1	0.79	0.52	
6,300.0	28.23	294.91	5,577.9	1,288.1	-2,463.1	2,779.6	1.79	-1.61	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8508D-21 N22 496
Project:	Story Gulch	TVD Reference:	WELL @ 7602.0ft (Patterson 306)
Site:	S22-T4S-R96W (N22 496) (Column Pattern)	MD Reference:	WELL @ 7602.0ft (Patterson 306)
Well:	8508D-21 N22 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
6,400.0	26.79	295.42	5,666.6	1,307.8	-2,504.9	2,825.8	1.45	-1.44	
6,500.0	25.10	294.86	5,756.5	1,326.3	-2,544.5	2,869.4	1.71	-1.69	
6,600.0	24.68	295.43	5,847.5	1,343.9	-2,582.2	2,911.0	0.49	-0.42	
6,700.0	26.58	295.89	5,937.8	1,362.6	-2,620.8	2,953.9	1.91	1.90	
6,800.0	28.62	297.15	6,026.3	1,383.2	-2,662.7	3,000.5	2.12	2.04	
6,900.0	29.08	301.06	6,113.7	1,406.6	-2,705.1	3,049.0	1.94	0.46	
7,000.0	30.51	303.51	6,200.7	1,433.2	-2,746.8	3,098.2	1.87	1.42	
7,100.0	31.43	305.47	6,286.3	1,462.4	-2,789.3	3,149.4	1.37	0.92	
7,200.0	31.70	305.60	6,371.5	1,492.9	-2,831.9	3,201.2	0.28	0.27	
7,300.0	29.87	304.95	6,457.4	1,522.5	-2,873.7	3,252.0	1.85	-1.82	
7,400.0	27.82	304.00	6,545.0	1,549.8	-2,913.4	3,299.8	2.11	-2.06	
7,500.0	26.01	303.03	6,634.2	1,574.7	-2,951.2	3,344.8	1.86	-1.81	
7,600.0	24.37	303.13	6,724.6	1,598.0	-2,986.8	3,387.1	1.64	-1.64	
7,700.0	22.59	301.23	6,816.3	1,619.5	-3,020.5	3,426.9	1.94	-1.78	
7,800.0	21.00	297.82	6,909.2	1,637.7	-3,052.6	3,463.8	2.03	-1.59	
7,900.0	19.74	295.91	7,003.0	1,653.2	-3,083.8	3,498.7	1.42	-1.26	
8,000.0	17.92	294.19	7,097.6	1,667.1	-3,113.1	3,531.1	1.91	-1.82	
8,100.0	16.58	292.47	7,193.1	1,678.7	-3,140.2	3,560.5	1.43	-1.34	
8,200.0	14.96	291.13	7,289.3	1,688.8	-3,165.5	3,587.6	1.67	-1.63	
8,300.0	13.40	286.90	7,386.3	1,696.9	-3,188.6	3,611.8	1.87	-1.56	
8,400.0	11.13	287.26	7,484.0	1,703.1	-3,208.9	3,632.7	2.27	-2.27	
8,500.0	9.18	288.71	7,582.4	1,708.6	-3,225.6	3,650.0	1.97	-1.96	
8,600.0	7.73	286.39	7,681.3	1,712.9	-3,239.7	3,664.6	1.48	-1.44	
8,700.0	5.69	289.62	7,780.6	1,716.6	-3,250.9	3,676.2	2.08	-2.05	
8,800.0	3.82	287.16	7,880.3	1,719.4	-3,258.4	3,684.1	1.88	-1.87	
8,805.6	3.77	286.66	7,885.9	1,719.5	-3,258.8	3,684.5	1.04	-0.86	8508D-21 N22 496 TGT (Column) (2)
8,900.0	3.02	275.90	7,980.1	1,720.5	-3,264.2	3,689.7	1.04	-0.80	
9,000.0	2.09	266.73	8,080.0	1,720.6	-3,268.7	3,693.9	1.01	-0.93	
9,100.0	0.63	227.08	8,180.0	1,720.1	-3,271.1	3,695.7	1.65	-1.45	
9,200.0	1.08	181.09	8,280.0	1,718.9	-3,271.2	3,695.3	0.78	0.44	
9,300.0	1.84	193.44	8,380.0	1,716.4	-3,271.6	3,694.4	0.82	0.77	
9,400.0	0.79	200.48	8,479.9	1,714.0	-3,272.2	3,693.9	1.06	-1.05	
9,500.0	0.14	325.50	8,579.9	1,713.5	-3,272.5	3,693.9	0.88	-0.65	
9,600.0	0.67	352.84	8,679.9	1,714.2	-3,272.6	3,694.4	0.55	0.53	
9,700.0	0.52	343.89	8,779.9	1,714.9	-3,273.0	3,695.1	0.17	-0.15	
9,800.0	2.63	24.26	8,879.9	1,717.9	-3,271.9	3,695.5	2.26	2.11	
9,900.0	1.90	21.39	8,979.8	1,721.5	-3,270.4	3,695.7	0.74	-0.73	
10,000.0	1.24	14.46	9,079.7	1,724.2	-3,269.5	3,696.2	0.68	-0.65	
10,100.0	0.76	355.11	9,179.7	1,725.8	-3,269.3	3,696.7	0.58	-0.48	
10,200.0	0.61	318.17	9,279.7	1,726.9	-3,269.7	3,697.6	0.46	-0.15	
10,300.0	0.86	279.78	9,379.7	1,727.4	-3,270.8	3,698.8	0.54	0.25	
10,400.0	1.30	251.70	9,479.7	1,727.2	-3,272.6	3,700.3	0.67	0.44	
10,500.0	1.66	232.44	9,579.7	1,726.0	-3,274.9	3,701.8	0.61	0.36	
10,600.0	1.01	244.00	9,679.6	1,724.6	-3,276.9	3,702.9	0.70	-0.65	
10,700.0	1.03	220.31	9,779.6	1,723.6	-3,278.2	3,703.6	0.42	0.01	
10,800.0	1.29	218.36	9,879.6	1,721.8	-3,279.5	3,704.0	0.27	0.26	
10,900.0	0.62	277.19	9,979.6	1,720.9	-3,280.9	3,704.8	1.10	-0.67	
11,000.0	0.72	15.03	10,079.6	1,722.1	-3,281.1	3,705.5	1.01	0.10	
11,100.0	0.25	128.61	10,179.6	1,722.4	-3,280.7	3,705.3	0.85	-0.47	
11,200.0	0.39	186.54	10,279.6	1,721.9	-3,280.6	3,704.9	0.34	0.14	
11,300.0	0.31	202.77	10,379.6	1,721.2	-3,280.8	3,704.8	0.13	-0.08	
11,400.0	0.04	307.36	10,479.6	1,721.0	-3,280.9	3,704.8	0.32	-0.27	
11,500.0	0.10	325.25	10,579.6	1,721.1	-3,280.9	3,704.9	0.06	0.06	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8508D-21 N22 496
Project:	Story Gulch	TVD Reference:	WELL @ 7602.0ft (Patterson 306)
Site:	S22-T4S-R96W (N22 496) (Column Pattern)	MD Reference:	WELL @ 7602.0ft (Patterson 306)
Well:	8508D-21 N22 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
11,600.0	0.28	311.43	10,679.6	1,721.3	-3,281.2	3,705.2	0.19	0.18	
11,700.0	1.30	290.10	10,779.5	1,721.9	-3,282.3	3,706.5	1.04	1.02	
11,800.0	2.26	263.85	10,879.5	1,722.0	-3,285.4	3,709.3	1.24	0.96	
11,852.6	2.59	257.69	10,932.0	1,721.7	-3,287.6	3,711.1	0.79	0.62	8508D-21 N22 496 PBHL (Column)
11,900.0	2.90	253.36	10,979.4	1,721.1	-3,289.9	3,712.8	0.79	0.66	

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
8508D-21 N22 496 TGT - hit/miss target - Shape	0.00	0.00	7,885.3	1,722.8	-3,268.6	1,686,811.36	2,249,066.02	39° 41' 19.71 N	108° 10' 7.34 W
- actual wellpath misses target center by 10.4ft at 8805.6ft MD (7885.9 TVD, 1719.5 N, -3258.8 E)									
- Point									
8508D-21 N22 496 TGT - hit/miss target - Shape	0.00	0.00	7,272.0	1,722.8	-3,268.6	1,686,811.36	2,249,066.02	39° 41' 19.71 N	108° 10' 7.34 W
- actual wellpath misses target center by 109.4ft at 8209.8ft MD (7298.7 TVD, 1689.7 N, -3167.9 E)									
- Point									
8508D-21 N22 496 PBH - hit/miss target - Shape	0.00	0.00	10,932.0	1,712.8	-3,285.6	1,686,801.84	2,249,048.69	39° 41' 19.61 N	108° 10' 7.55 W
- actual wellpath misses target center by 9.1ft at 11852.5ft MD (10932.0 TVD, 1721.7 N, -3287.6 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,045.0	1,896.5	305.4	-589.0	Last Cathedral Survey @ 2,045' MD
11,939.0	11,018.3	1,720.5	-3,291.8	Last Cathedral Survey @ 11,939' MD

Checked By: _____	Approved By: _____	Date: _____
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