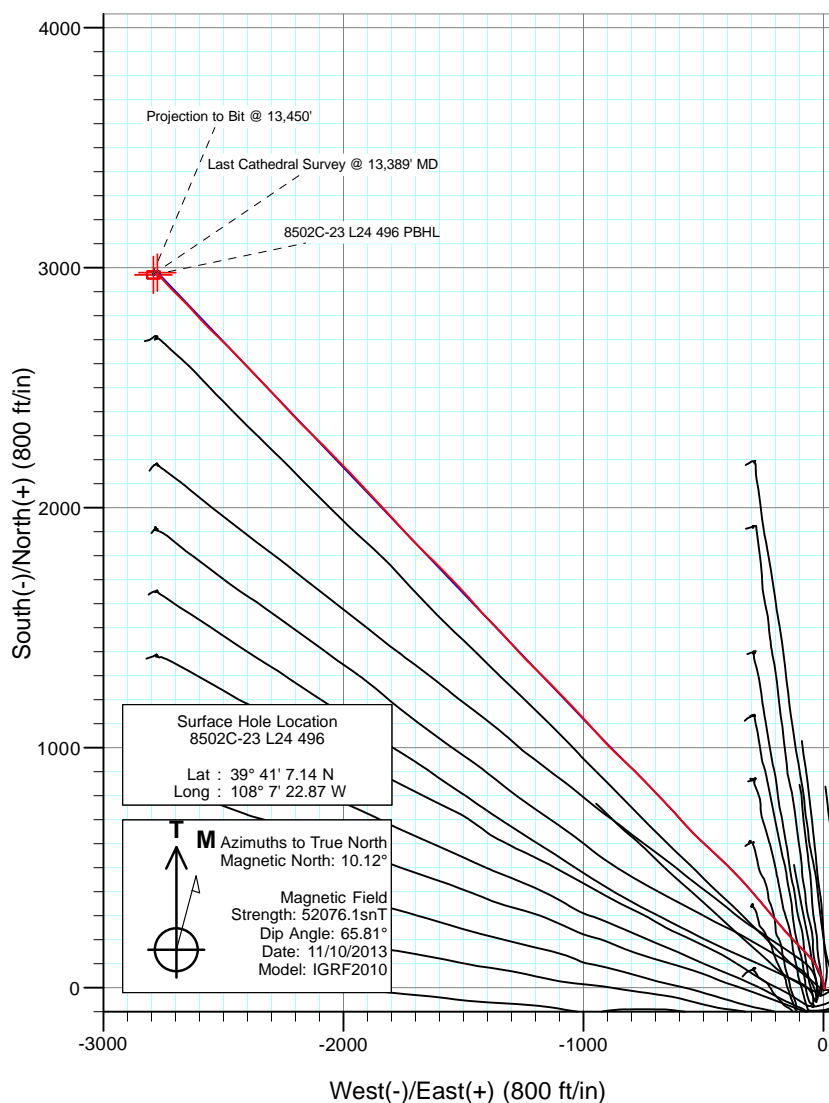
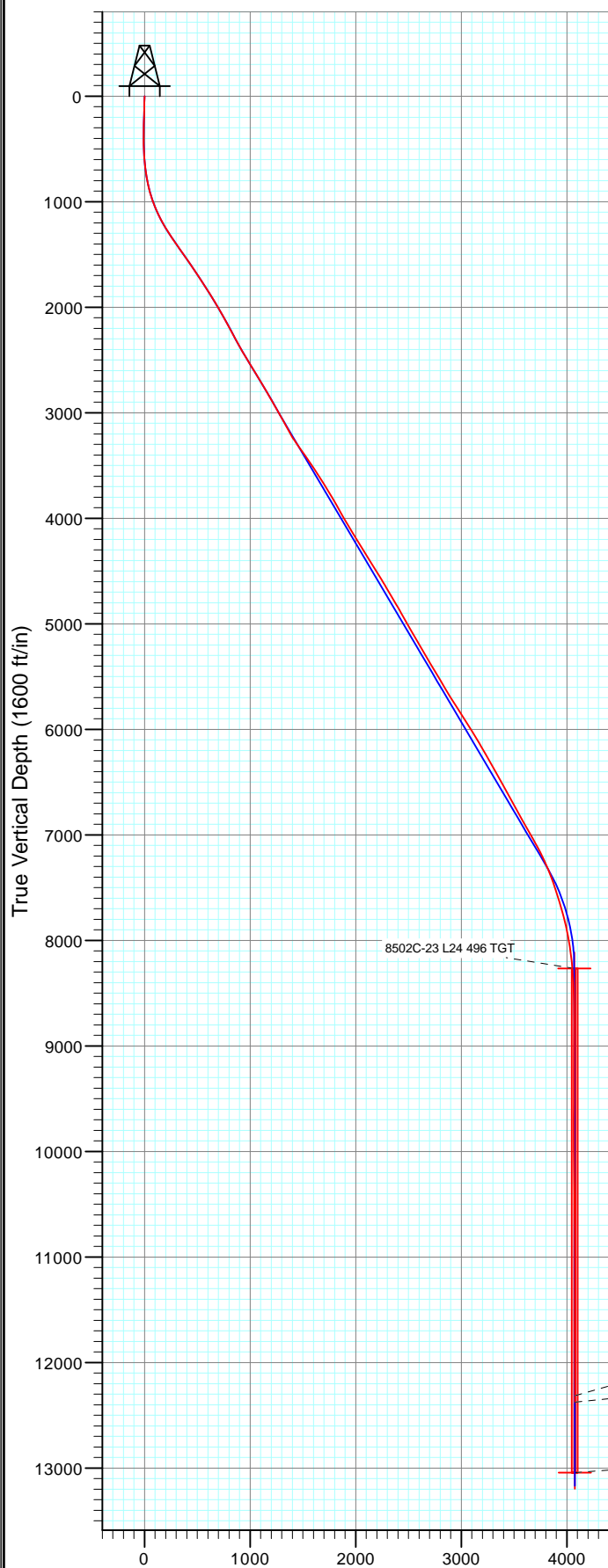




Project: Story Gulch
Site: L24 496
Well: 8502C-23 L24 496
Wellbore: DD
Design: FINAL



DESIGN TARGET DETAILS

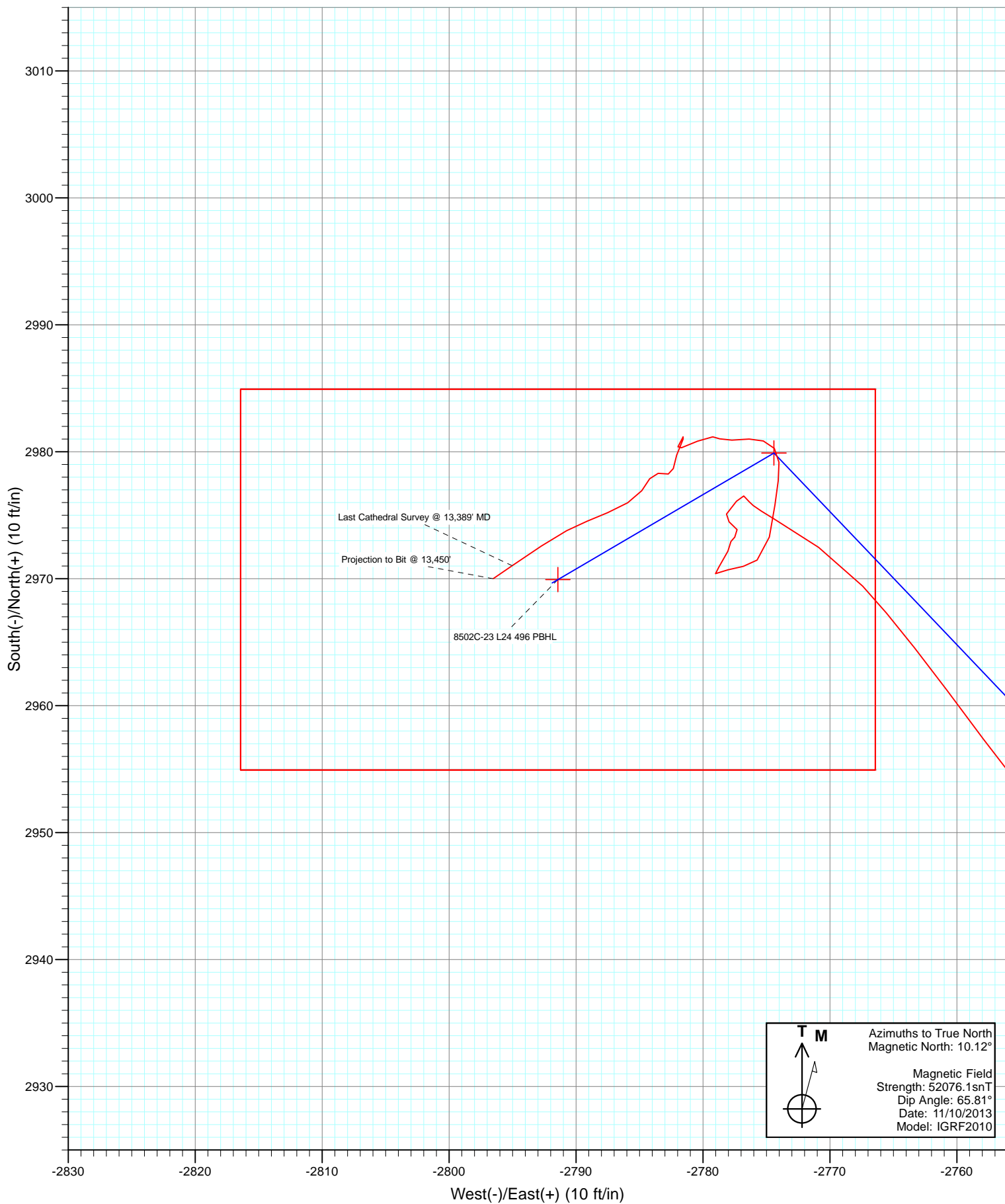
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
8502C-23 L24 496 TGT	8267.0	2979.9	-2774.4	39° 41' 36.59 N	108° 7' 58.36 W
8502C-23 L24 496 PBHL	13044.0	2969.9	-2791.4	39° 41' 36.49 N	108° 7' 58.58 W

FINAL
8502C-23 L24 496
135293/240655 (SH) 135553/250955 (MH); SC
KB @ 8208.0ft (Original Well Elev)
Ground Elevation @ 8193.0
North American Datum 1983
Well 8502C-23 L24 496, True North

Vertical Section at 316.77° (1600 ft/in)



Project: Story Gulch
Site: L24 496
Well: 8502C-23 L24 496
Wellbore: DD
Design: FINAL



T M

Azimuths to True North
Magnetic North: 10.12°

Magnetic Field
Strength: 52076.1snT
Dip Angle: 65.81°
Date: 11/10/2013
Model: IGRF2010

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8502C-23 L24 496
Project:	Story Gulch	TVD Reference:	KB @ 8208.0ft (Original Well Elev)
Site:	L24 496	MD Reference:	KB @ 8208.0ft (Original Well Elev)
Well:	8502C-23 L24 496	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	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	L24 496			
Site Position:		Northing:	1,685,024.52 ft	Latitude: 39° 41' 5.72 N
From:	Lat/Long	Easting:	2,261,789.15 ft	Longitude: 108° 7' 23.99 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: -1.65 °

Well	8502C-23 L24 496			
Well Position	+N/-S	0.0 ft	Northing:	1,685,165.59 ft
	+E/-W	0.0 ft	Easting:	2,261,880.82 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Ground Level:	8,193.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/10/2013	10.12	65.81	52,076

Design	FINAL			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	316.77

Survey Program	Date	11/23/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
120.0	625.0	Survey #2 (DD)	Gyro	Gyro
668.0	13,450.0	Survey #3 (DD)	Geolink 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	
120.0	1.20	138.40	120.0	-0.9	0.8	-1.3	1.00	1.00	
150.0	1.50	131.20	150.0	-1.4	1.3	-2.0	1.15	1.00	
180.0	2.10	127.80	180.0	-2.0	2.1	-2.9	2.03	2.00	
211.0	2.20	129.20	210.9	-2.8	3.0	-4.0	0.36	0.32	
242.0	2.20	129.50	241.9	-3.5	3.9	-5.2	0.04	0.00	
272.0	2.10	131.30	271.9	-4.2	4.8	-6.3	0.40	-0.33	
302.0	1.80	128.20	301.9	-4.9	5.5	-7.4	1.06	-1.00	
333.0	1.10	123.50	332.9	-5.4	6.2	-8.1	2.29	-2.26	
363.0	0.60	97.80	362.9	-5.5	6.6	-8.5	2.06	-1.67	
394.0	0.40	353.90	393.9	-5.5	6.7	-8.6	2.57	-0.65	
423.0	1.10	349.70	422.9	-5.1	6.7	-8.3	2.42	2.41	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8502C-23 L24 496
Project:	Story Gulch	TVD Reference:	KB @ 8208.0ft (Original Well Elev)
Site:	L24 496	MD Reference:	KB @ 8208.0ft (Original Well Elev)
Well:	8502C-23 L24 496	North Reference:	True
Wellbore:	DD	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
454.0	1.60	4.20	453.9	-4.4	6.6	-7.7	1.94	1.61	
484.0	2.60	355.70	483.8	-3.3	6.6	-6.9	3.48	3.33	
533.0	3.30	341.50	532.8	-0.8	6.1	-4.8	2.05	1.43	
579.0	4.80	339.80	578.7	2.3	5.0	-1.8	3.27	3.26	
625.0	6.20	343.90	624.4	6.4	3.6	2.2	3.16	3.04	
668.0	7.00	342.00	667.2	11.2	2.2	6.6	1.93	1.86	
699.0	8.20	349.10	697.9	15.1	1.2	10.2	4.91	3.87	
745.0	9.90	344.60	743.3	22.2	-0.5	16.5	4.00	3.70	
791.0	11.60	347.80	788.5	30.5	-2.5	23.9	3.92	3.70	
837.0	13.40	340.10	833.4	40.0	-5.3	32.8	5.32	3.91	
883.0	15.20	338.70	878.0	50.7	-9.3	43.3	3.98	3.91	
929.0	17.10	335.60	922.2	62.4	-14.3	55.3	4.53	4.13	
975.0	18.90	332.50	965.9	75.2	-20.5	68.9	4.43	3.91	
1,021.0	20.80	329.00	1,009.2	88.8	-28.2	84.0	4.87	4.13	
1,067.0	22.40	324.10	1,052.0	102.9	-37.5	100.7	5.24	3.48	
1,113.0	23.90	321.80	1,094.3	117.4	-48.4	118.7	3.81	3.26	
1,159.0	26.10	319.60	1,135.9	132.4	-60.7	138.1	5.19	4.78	
1,205.0	28.00	314.90	1,176.9	147.7	-75.0	159.0	6.21	4.13	
1,251.0	30.10	315.30	1,217.1	163.5	-90.7	181.3	4.58	4.57	
1,343.0	33.40	316.60	1,295.3	198.3	-124.4	229.7	3.66	3.59	
1,435.0	34.30	318.30	1,371.8	236.1	-159.0	280.9	1.42	0.98	
1,526.0	34.90	320.30	1,446.7	275.3	-192.7	332.5	1.41	0.66	
1,618.0	34.90	320.70	1,522.1	315.9	-226.2	385.1	0.25	0.00	
1,710.0	34.40	319.40	1,597.8	356.0	-259.8	437.3	0.97	-0.54	
1,802.0	33.70	319.10	1,674.0	395.0	-293.4	488.8	0.78	-0.76	
1,894.0	33.20	317.30	1,750.8	432.8	-327.2	539.4	1.21	-0.54	
1,986.0	33.00	317.10	1,827.9	469.7	-361.3	589.7	0.25	-0.22	
2,078.0	31.50	314.60	1,905.7	504.9	-395.5	638.8	2.18	-1.63	
2,169.0	30.60	313.00	1,983.6	537.4	-429.3	685.6	1.34	-0.99	
2,261.0	30.00	313.40	2,063.1	569.2	-463.2	732.0	0.69	-0.65	
2,353.0	29.00	313.20	2,143.1	600.2	-496.1	777.2	1.09	-1.09	
2,445.0	28.10	313.70	2,223.9	630.5	-528.1	821.1	1.01	-0.98	
2,491.0	27.60	314.70	2,264.6	645.5	-543.5	842.5	1.49	-1.09	
2,537.0	27.90	316.60	2,305.3	660.8	-558.4	863.9	2.03	0.65	
2,583.0	28.50	318.00	2,345.9	676.8	-573.2	885.7	1.94	1.30	
2,629.0	29.50	319.30	2,386.1	693.5	-587.9	908.0	2.57	2.17	
2,721.0	31.00	317.50	2,465.6	728.1	-618.7	954.3	1.91	1.63	
2,813.0	31.40	316.40	2,544.3	763.0	-651.2	1,002.0	0.76	0.43	
2,905.0	31.20	316.60	2,622.9	797.6	-684.1	1,049.7	0.24	-0.22	
2,995.0	31.10	316.40	2,699.9	831.4	-716.2	1,096.3	0.16	-0.11	
3,087.0	30.80	315.20	2,778.8	865.3	-749.2	1,143.6	0.75	-0.33	
3,179.0	30.50	315.00	2,857.9	898.5	-782.3	1,190.5	0.34	-0.33	
3,271.0	29.80	314.00	2,937.5	930.9	-815.2	1,236.7	0.94	-0.76	
3,364.0	28.50	312.40	3,018.7	962.0	-848.2	1,281.9	1.63	-1.40	
3,456.0	28.20	314.70	3,099.7	992.0	-879.9	1,325.5	1.23	-0.33	
3,548.0	29.10	317.80	3,180.4	1,023.9	-910.4	1,369.6	1.89	0.98	
3,640.0	33.90	317.80	3,258.9	1,059.5	-942.6	1,417.6	5.22	5.22	
3,731.0	35.50	317.80	3,333.7	1,097.9	-977.4	1,469.4	1.76	1.76	
3,823.0	34.90	317.60	3,408.8	1,137.1	-1,013.1	1,522.4	0.66	-0.65	
3,915.0	34.30	316.70	3,484.6	1,175.4	-1,048.7	1,574.7	0.86	-0.65	
4,007.0	33.90	315.50	3,560.8	1,212.6	-1,084.4	1,626.2	0.85	-0.43	
4,099.0	32.30	315.30	3,637.8	1,248.3	-1,119.7	1,676.5	1.74	-1.74	
4,191.0	30.50	315.40	3,716.3	1,282.4	-1,153.4	1,724.4	1.96	-1.96	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8502C-23 L24 496
Project:	Story Gulch	TVD Reference:	KB @ 8208.0ft (Original Well Elev)
Site:	L24 496	MD Reference:	KB @ 8208.0ft (Original Well Elev)
Well:	8502C-23 L24 496	North Reference:	True
Wellbore:	DD	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
4,282.0	31.60	315.20	3,794.3	1,315.8	-1,186.4	1,771.3	1.21	1.21	
4,375.0	29.60	313.70	3,874.3	1,349.0	-1,220.2	1,818.6	2.30	-2.15	
4,466.0	28.90	317.00	3,953.8	1,380.6	-1,251.4	1,863.0	1.93	-0.77	
4,559.0	30.10	316.80	4,034.7	1,414.0	-1,282.7	1,908.8	1.29	1.29	
4,650.0	31.30	319.20	4,112.9	1,448.5	-1,313.8	1,955.3	1.88	1.32	
4,742.0	32.30	316.10	4,191.1	1,484.4	-1,346.4	2,003.7	2.08	1.09	
4,834.0	30.70	314.40	4,269.6	1,518.5	-1,380.3	2,051.8	1.99	-1.74	
4,926.0	31.60	318.30	4,348.3	1,552.9	-1,413.1	2,099.3	2.40	0.98	
5,018.0	33.10	318.80	4,426.0	1,589.8	-1,445.7	2,148.6	1.66	1.63	
5,110.0	31.20	317.80	4,503.9	1,626.4	-1,478.2	2,197.5	2.14	-2.07	
5,202.0	31.80	317.00	4,582.4	1,661.8	-1,510.8	2,245.6	0.79	0.65	
5,294.0	29.70	316.50	4,661.4	1,696.0	-1,543.0	2,292.6	2.30	-2.28	
5,385.0	30.40	315.40	4,740.2	1,728.8	-1,574.7	2,338.1	0.98	0.77	
5,477.0	31.20	315.20	4,819.2	1,762.3	-1,607.8	2,385.2	0.88	0.87	
5,569.0	28.90	313.30	4,898.9	1,794.4	-1,640.8	2,431.3	2.71	-2.50	
5,661.0	30.10	314.70	4,978.9	1,825.9	-1,673.4	2,476.5	1.50	1.30	
5,753.0	29.30	315.50	5,058.8	1,858.2	-1,705.5	2,522.1	0.97	-0.87	
5,845.0	30.10	318.20	5,138.8	1,891.4	-1,736.7	2,567.6	1.69	0.87	
5,936.0	30.50	317.30	5,217.3	1,925.4	-1,767.6	2,613.5	0.66	0.44	
6,028.0	31.20	317.30	5,296.3	1,960.1	-1,799.6	2,660.7	0.76	0.76	
6,120.0	29.50	318.40	5,375.7	1,994.5	-1,830.8	2,707.2	1.94	-1.85	
6,212.0	30.90	316.20	5,455.2	2,028.5	-1,862.2	2,753.5	1.94	1.52	
6,304.0	31.10	317.00	5,534.1	2,063.0	-1,894.7	2,800.8	0.50	0.22	
6,395.0	30.70	317.80	5,612.2	2,097.4	-1,926.3	2,847.6	0.63	-0.44	
6,488.0	31.50	315.70	5,691.8	2,132.3	-1,959.3	2,895.6	1.45	0.86	
6,580.0	33.00	316.20	5,769.6	2,167.6	-1,993.4	2,944.7	1.66	1.63	
6,672.0	31.80	315.00	5,847.3	2,202.8	-2,027.9	2,994.0	1.48	-1.30	
6,764.0	33.20	315.90	5,924.9	2,238.1	-2,062.5	3,043.4	1.61	1.52	
6,855.0	31.20	313.90	6,001.9	2,272.3	-2,096.9	3,091.8	2.49	-2.20	
6,947.0	31.60	315.60	6,080.4	2,306.1	-2,130.9	3,139.7	1.06	0.43	
7,039.0	29.60	313.70	6,159.6	2,339.0	-2,164.2	3,186.5	2.41	-2.17	
7,131.0	30.10	316.40	6,239.4	2,371.4	-2,196.5	3,232.3	1.56	0.54	
7,223.0	30.50	318.10	6,318.8	2,405.5	-2,228.0	3,278.7	1.03	0.43	
7,315.0	28.70	316.90	6,398.8	2,439.0	-2,258.7	3,324.1	2.06	-1.96	
7,407.0	28.40	316.40	6,479.6	2,471.0	-2,288.9	3,368.1	0.42	-0.33	
7,499.0	29.30	316.20	6,560.2	2,503.1	-2,319.6	3,412.5	0.98	0.98	
7,590.0	28.70	316.90	6,639.8	2,535.1	-2,349.9	3,456.6	0.76	-0.66	
7,682.0	29.50	316.50	6,720.2	2,567.6	-2,380.6	3,501.4	0.89	0.87	
7,774.0	28.50	316.50	6,800.6	2,600.0	-2,411.3	3,546.0	1.09	-1.09	
7,866.0	28.70	315.60	6,881.4	2,631.7	-2,441.9	3,590.0	0.52	0.22	
7,958.0	30.50	315.40	6,961.4	2,664.1	-2,473.7	3,635.4	1.96	1.96	
8,050.0	29.40	314.50	7,041.1	2,696.6	-2,506.2	3,681.3	1.29	-1.20	
8,141.0	27.90	313.90	7,121.0	2,727.0	-2,537.5	3,724.9	1.68	-1.65	
8,233.0	26.40	314.10	7,202.8	2,756.1	-2,567.7	3,766.8	1.63	-1.63	
8,325.0	23.40	318.40	7,286.3	2,784.0	-2,594.5	3,805.5	3.81	-3.26	
8,417.0	21.40	317.30	7,371.3	2,810.0	-2,618.0	3,840.6	2.22	-2.17	
8,509.0	19.10	318.00	7,457.6	2,833.6	-2,639.5	3,872.4	2.51	-2.50	
8,601.0	17.30	315.10	7,545.0	2,854.4	-2,659.2	3,901.2	2.19	-1.96	
8,693.0	16.70	315.70	7,633.0	2,873.6	-2,678.1	3,928.0	0.68	-0.65	
8,785.0	15.90	315.50	7,721.3	2,892.0	-2,696.2	3,953.9	0.87	-0.87	
8,877.0	14.00	315.60	7,810.2	2,909.0	-2,712.8	3,977.6	2.07	-2.07	
8,969.0	12.20	314.20	7,899.8	2,923.7	-2,727.6	3,998.4	1.99	-1.96	
9,061.0	10.50	318.30	7,990.0	2,936.8	-2,740.1	4,016.5	2.04	-1.85	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8502C-23 L24 496
Project:	Story Gulch	TVD Reference:	KB @ 8208.0ft (Original Well Elev)
Site:	L24 496	MD Reference:	KB @ 8208.0ft (Original Well Elev)
Well:	8502C-23 L24 496	North Reference:	True
Wellbore:	DD	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
9,153.0	8.60	318.10	8,080.7	2,948.1	-2,750.3	4,031.8	2.07	-2.07	
9,244.0	6.50	323.50	8,170.9	2,957.3	-2,757.9	4,043.7	2.43	-2.31	
9,336.0	4.80	322.10	8,262.5	2,964.6	-2,763.3	4,052.7	1.85	-1.85	
9,428.0	3.10	316.90	8,354.3	2,969.4	-2,767.4	4,059.0	1.89	-1.85	
9,520.0	2.70	304.80	8,446.1	2,972.5	-2,770.9	4,063.6	0.79	-0.43	
9,612.0	2.50	300.30	8,538.0	2,974.7	-2,774.4	4,067.7	0.31	-0.22	
9,704.0	0.50	326.30	8,630.0	2,976.1	-2,776.4	4,070.0	2.24	-2.17	
9,796.0	0.30	300.30	8,722.0	2,976.5	-2,776.8	4,070.6	0.29	-0.22	
9,888.0	0.80	214.00	8,814.0	2,976.1	-2,777.4	4,070.7	0.91	0.54	
9,980.0	0.80	222.00	8,906.0	2,975.1	-2,778.1	4,070.5	0.12	0.00	
10,071.0	0.80	102.70	8,997.0	2,974.5	-2,777.9	4,069.9	1.52	0.00	
10,163.0	0.60	177.70	9,089.0	2,973.9	-2,777.3	4,069.0	0.94	-0.22	
10,255.0	0.30	242.40	9,181.0	2,973.3	-2,777.5	4,068.7	0.59	-0.33	
10,347.0	0.30	201.00	9,273.0	2,972.9	-2,777.8	4,068.7	0.23	0.00	
10,439.0	0.70	196.00	9,365.0	2,972.2	-2,778.0	4,068.3	0.44	0.43	
10,531.0	1.10	218.10	9,457.0	2,970.9	-2,778.7	4,067.9	0.57	0.43	
10,623.0	0.40	59.30	9,549.0	2,970.4	-2,779.0	4,067.7	1.61	-0.76	
10,715.0	0.90	78.70	9,641.0	2,970.7	-2,778.0	4,067.2	0.59	0.54	
10,816.0	0.50	76.00	9,741.9	2,971.0	-2,776.8	4,066.6	0.40	-0.40	
10,908.0	1.00	60.00	9,833.9	2,971.5	-2,775.7	4,066.2	0.58	0.54	
11,000.0	1.80	10.90	9,925.9	2,973.3	-2,774.8	4,066.9	1.49	0.87	
11,092.0	1.40	8.50	10,017.9	2,975.8	-2,774.3	4,068.4	0.44	-0.43	
11,184.0	1.00	6.50	10,109.9	2,977.7	-2,774.1	4,069.6	0.44	-0.43	
11,276.0	0.80	357.10	10,201.8	2,979.2	-2,774.0	4,070.7	0.27	-0.22	
11,368.0	0.70	324.10	10,293.8	2,980.3	-2,774.4	4,071.7	0.47	-0.11	
11,460.0	0.70	284.20	10,385.8	2,980.9	-2,775.2	4,072.7	0.52	0.00	
11,552.0	0.70	270.80	10,477.8	2,981.0	-2,776.4	4,073.6	0.18	0.00	
11,644.0	1.00	263.40	10,569.8	2,980.9	-2,777.7	4,074.5	0.35	0.33	
11,736.0	0.30	319.60	10,661.8	2,981.0	-2,778.7	4,075.2	0.95	-0.76	
11,828.0	0.50	267.40	10,753.8	2,981.2	-2,779.2	4,075.7	0.43	0.22	
11,919.0	1.10	248.20	10,844.8	2,980.8	-2,780.4	4,076.3	0.71	0.66	
12,011.0	0.60	246.40	10,936.8	2,980.3	-2,781.7	4,076.7	0.54	-0.54	
12,103.0	0.40	30.50	11,028.8	2,980.4	-2,782.0	4,077.0	1.04	-0.22	
12,195.0	0.70	26.20	11,120.8	2,981.2	-2,781.6	4,077.3	0.33	0.33	
12,287.0	0.90	199.50	11,212.8	2,981.0	-2,781.6	4,077.2	1.74	0.22	
12,379.0	0.80	205.00	11,304.8	2,979.7	-2,782.1	4,076.6	0.14	-0.11	
12,471.0	0.60	179.80	11,396.8	2,978.7	-2,782.3	4,076.0	0.39	-0.22	
12,563.0	0.50	279.50	11,488.8	2,978.3	-2,782.7	4,076.0	0.92	-0.11	
12,655.0	0.50	266.60	11,580.8	2,978.3	-2,783.5	4,076.5	0.12	0.00	
12,747.0	0.60	213.70	11,672.8	2,977.9	-2,784.2	4,076.7	0.54	0.11	
12,839.0	0.80	213.10	11,764.7	2,976.9	-2,784.8	4,076.4	0.22	0.22	
12,930.0	1.10	241.00	11,855.7	2,976.0	-2,785.9	4,076.5	0.60	0.33	
13,022.0	1.10	247.00	11,947.7	2,975.2	-2,787.5	4,077.0	0.13	0.00	
13,114.0	1.10	247.50	12,039.7	2,974.5	-2,789.1	4,077.6	0.01	0.00	
13,206.0	1.10	242.60	12,131.7	2,973.8	-2,790.7	4,078.2	0.10	0.00	
13,298.0	1.80	236.30	12,223.7	2,972.6	-2,792.7	4,078.7	0.78	0.76	
13,389.0	1.70	235.80	12,314.6	2,971.0	-2,795.0	4,079.1	0.11	-0.11	Last Cathedral Survey @ 13,389' MD
13,450.0	1.70	235.80	12,375.6	2,970.0	-2,796.5	4,079.4	0.00	0.00	Projection to Bit @ 13,450'

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well 8502C-23 L24 496
Project:	Story Gulch	TVD Reference:	KB @ 8208.0ft (Original Well Elev)
Site:	L24 496	MD Reference:	KB @ 8208.0ft (Original Well Elev)
Well:	8502C-23 L24 496	North Reference:	True
Wellbore:	DD	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									
8502C-23 L24 496 TGT	0.00	0.00	8,267.0	2,979.9	-2,774.4	1,688,224.35	2,259,193.61	39° 41' 36.59 N	108° 7' 58.36 W
- actual wellpath misses target center by 18.5ft at 9341.8ft MD (8268.3 TVD, 2964.9 N, -2763.6 E)									
- Point									
8502C-23 L24 496 PBHI	0.00	0.00	13,044.0	2,969.9	-2,791.4	1,688,214.87	2,259,176.30	39° 41' 36.49 N	108° 7' 58.58 W
- actual wellpath misses target center by 668.4ft at 13450.0ft MD (12375.6 TVD, 2970.0 N, -2796.5 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
13,389.0	12,314.6	2,971.0	-2,795.0	Last Cathedral Survey @ 13,389' MD
13,450.0	12,375.6	2,970.0	-2,796.5	Projection to Bit @ 13,450'

Checked By: _____ Approved By: _____ Date: _____