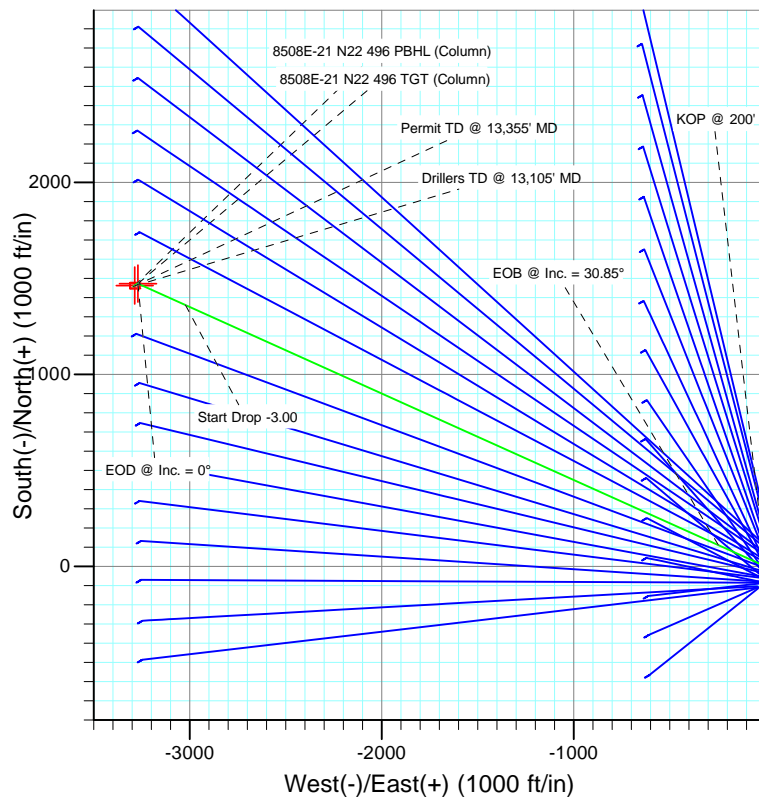




Project: Story Gulch
Site: S22-T4S-R96W (N22 496) (Column Pattern)
Well: 8508E-21 N22 496
Wellbore: DD
Design: Plan #1



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1228.4	30.85	294.26	1179.4	111.0	-246.4	3.00	294.26	270.3	
4	7166.9	30.85	294.26	6277.6	1362.1	-3023.0	0.00	0.00	3315.6	
5	8195.3	0.00	0.00	7257.0	1473.1	-3269.4	3.00	180.00	3585.9	8508E-21 N22 496 TGT (Column)
6	8320.9	0.31	239.45	7382.6	1472.9	-3269.7	0.25	239.45	3586.1	
7	11855.4	0.31	239.45	10917.0	1463.1	-3286.4	0.00	0.00	3597.3	8508E-21 N22 496 PBHL (Column)
8	13105.4	0.31	239.45	12167.0	1459.6	-3292.3	0.00	0.00	3601.3	
9	13355.4	0.31	239.45	12417.0	1458.9	-3293.5	0.00	0.00	3602.1	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
217.0	217.0	Para Creek (TVD)
517.0	518.5	Mahog Bench (TVD)
577.0	579.5	Base B Groove (TVD)
4117.0	4650.2	Was G (TVD)
7217.0	8155.3	WF (TVD)
7257.0	8195.3	TOG (TVD)
10917.0	11855.4	Rlns (TVD)
11247.0	12185.4	Cozz (TVD)
11437.0	12375.4	Corc (TVD)
11717.0	12655.4	Sego (TVD)
11917.0	12855.4	L Sego (TVD)



Azimuths to True North
Magnetic North: 10.52°

Magnetic Field
Strength: 52372.2snT
Dip Angle: 65.88°
Date: 12/2/2010
Model: IGRF2010

Plan #1 8508E-21 N22 496 WELL @ 7602.0ft (Original Well Elev)						
North American Datum 1983 Well 8508E-21 N22 496, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W
TD	No Target (Freehand)	293.89	Slot		0.0	0.0
				From TVD		
				0.0		
Name						
8508E-21 N22 496 TGT (Column)	TVD	+N/-S	+E/-W	Latitude	Longitude	
	7257.0	1473.1	-3269.4	39° 41' 17.06 N	108° 10' 7.45 W	
8508E-21 N22 496 PBHL (Column)	10917.0	1463.1	-3286.4	39° 41' 16.96 N	108° 10' 7.66 W	

Cathedral Energy

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well 8508E-21 N22 496
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7602.0ft (Original Well Elev)
Project:	Story Gulch	MD Reference:	WELL @ 7602.0ft (Original Well Elev)
Site:	S22-T4S-R96W (N22 496) (Column Pattern)	North Reference:	True
Well:	8508E-21 N22 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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	8508E-21 N22 496					
Well Position	+N/-S	0.0 ft	Northing:	1,684,975.51 ft	Latitude:	39° 41' 2.50 N
	+E/-W	0.0 ft	Easting:	2,252,274.40 ft	Longitude:	108° 9' 25.62 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	12/2/2010	10.52	65.88	52,372

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	293.89	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,228.4	30.85	294.26	1,179.4	111.0	-246.4	3.00	3.00	0.00	294.26	
7,166.9	30.85	294.26	6,277.6	1,362.1	-3,023.0	0.00	0.00	0.00	0.00	
8,195.3	0.00	0.00	7,257.0	1,473.1	-3,269.4	3.00	-3.00	0.00	180.00	8508E-21 N22 496 TC
8,320.9	0.31	239.45	7,382.6	1,472.9	-3,269.7	0.25	0.25	-96.00	239.45	
11,855.4	0.31	239.45	10,917.0	1,463.1	-3,286.4	0.00	0.00	0.00	0.00	8508E-21 N22 496 PE
13,105.4	0.31	239.45	12,167.0	1,459.6	-3,292.3	0.00	0.00	0.00	0.00	
13,355.4	0.31	239.45	12,417.0	1,458.9	-3,293.5	0.00	0.00	0.00	0.00	

Cathedral Energy

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well 8508E-21 N22 496
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7602.0ft (Original Well Elev)
Project:	Story Gulch	MD Reference:	WELL @ 7602.0ft (Original Well Elev)
Site:	S22-T4S-R96W (N22 496) (Column Pattern)	North Reference:	True
Well:	8508E-21 N22 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'
217.0	0.51	294.26	217.0	0.0	-0.1	0.1	3.00	3.00	Para Creek (TVD)
300.0	3.00	294.26	300.0	1.1	-2.4	2.6	3.00	3.00	
400.0	6.00	294.26	399.6	4.3	-9.5	10.5	3.00	3.00	
500.0	9.00	294.26	498.8	9.7	-21.4	23.5	3.00	3.00	
518.5	9.55	294.26	517.0	10.9	-24.2	26.5	3.00	3.00	Mahog Bench (TVD)
579.5	11.38	294.26	577.0	15.4	-34.3	37.6	3.00	3.00	Base B Groove (TVD)
600.0	12.00	294.26	597.1	17.1	-38.1	41.7	3.00	3.00	
700.0	15.00	294.26	694.3	26.7	-59.3	65.1	3.00	3.00	
800.0	18.00	294.26	790.2	38.4	-85.2	93.5	3.00	3.00	
900.0	21.00	294.26	884.4	52.1	-115.7	126.8	3.00	3.00	
1,000.0	24.00	294.26	976.8	67.8	-150.5	165.1	3.00	3.00	
1,100.0	27.00	294.26	1,067.1	85.5	-189.8	208.2	3.00	3.00	
1,200.0	30.00	294.26	1,154.9	105.1	-233.3	255.9	3.00	3.00	
1,228.4	30.85	294.26	1,179.4	111.0	-246.4	270.3	3.00	3.00	EOB @ Inc. = 30.85°
1,300.0	30.85	294.26	1,240.9	126.1	-279.9	307.0	0.00	0.00	
1,400.0	30.85	294.26	1,326.7	147.2	-326.6	358.2	0.00	0.00	
1,500.0	30.85	294.26	1,412.6	168.2	-373.4	409.5	0.00	0.00	
1,600.0	30.85	294.26	1,498.4	189.3	-420.1	460.8	0.00	0.00	
1,700.0	30.85	294.26	1,584.3	210.4	-466.9	512.1	0.00	0.00	
1,800.0	30.85	294.26	1,670.1	231.4	-513.7	563.4	0.00	0.00	
1,900.0	30.85	294.26	1,756.0	252.5	-560.4	614.7	0.00	0.00	
2,000.0	30.85	294.26	1,841.8	273.6	-607.2	665.9	0.00	0.00	
2,100.0	30.85	294.26	1,927.7	294.6	-653.9	717.2	0.00	0.00	
2,200.0	30.85	294.26	2,013.5	315.7	-700.7	768.5	0.00	0.00	
2,300.0	30.85	294.26	2,099.4	336.8	-747.4	819.8	0.00	0.00	
2,400.0	30.85	294.26	2,185.2	357.8	-794.2	871.1	0.00	0.00	
2,500.0	30.85	294.26	2,271.1	378.9	-840.9	922.3	0.00	0.00	
2,600.0	30.85	294.26	2,356.9	400.0	-887.7	973.6	0.00	0.00	
2,700.0	30.85	294.26	2,442.8	421.0	-934.5	1,024.9	0.00	0.00	
2,800.0	30.85	294.26	2,528.6	442.1	-981.2	1,076.2	0.00	0.00	
2,900.0	30.85	294.26	2,614.5	463.2	-1,028.0	1,127.5	0.00	0.00	
3,000.0	30.85	294.26	2,700.3	484.2	-1,074.7	1,178.8	0.00	0.00	
3,100.0	30.85	294.26	2,786.2	505.3	-1,121.5	1,230.0	0.00	0.00	
3,200.0	30.85	294.26	2,872.0	526.4	-1,168.2	1,281.3	0.00	0.00	
3,300.0	30.85	294.26	2,957.9	547.4	-1,215.0	1,332.6	0.00	0.00	
3,400.0	30.85	294.26	3,043.7	568.5	-1,261.7	1,383.9	0.00	0.00	
3,500.0	30.85	294.26	3,129.6	589.6	-1,308.5	1,435.2	0.00	0.00	
3,600.0	30.85	294.26	3,215.4	610.6	-1,355.3	1,486.4	0.00	0.00	
3,700.0	30.85	294.26	3,301.3	631.7	-1,402.0	1,537.7	0.00	0.00	
3,800.0	30.85	294.26	3,387.1	652.8	-1,448.8	1,589.0	0.00	0.00	
3,900.0	30.85	294.26	3,473.0	673.8	-1,495.5	1,640.3	0.00	0.00	
4,000.0	30.85	294.26	3,558.8	694.9	-1,542.3	1,691.6	0.00	0.00	
4,100.0	30.85	294.26	3,644.7	716.0	-1,589.0	1,742.9	0.00	0.00	
4,200.0	30.85	294.26	3,730.5	737.0	-1,635.8	1,794.1	0.00	0.00	
4,300.0	30.85	294.26	3,816.4	758.1	-1,682.6	1,845.4	0.00	0.00	
4,400.0	30.85	294.26	3,902.2	779.2	-1,729.3	1,896.7	0.00	0.00	
4,500.0	30.85	294.26	3,988.1	800.2	-1,776.1	1,948.0	0.00	0.00	
4,600.0	30.85	294.26	4,073.9	821.3	-1,822.8	1,999.3	0.00	0.00	
4,650.2	30.85	294.26	4,117.0	831.9	-1,846.3	2,025.0	0.00	0.00	Was G (TVD)

Cathedral Energy

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well 8508E-21 N22 496
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7602.0ft (Original Well Elev)
Project:	Story Gulch	MD Reference:	WELL @ 7602.0ft (Original Well Elev)
Site:	S22-T4S-R96W (N22 496) (Column Pattern)	North Reference:	True
Well:	8508E-21 N22 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,700.0	30.85	294.26	4,159.8	842.4	-1,869.6	2,050.5	0.00	0.00	
4,800.0	30.85	294.26	4,245.6	863.4	-1,916.3	2,101.8	0.00	0.00	
4,900.0	30.85	294.26	4,331.5	884.5	-1,963.1	2,153.1	0.00	0.00	
5,000.0	30.85	294.26	4,417.3	905.6	-2,009.8	2,204.4	0.00	0.00	
5,100.0	30.85	294.26	4,503.2	926.6	-2,056.6	2,255.7	0.00	0.00	
5,200.0	30.85	294.26	4,589.0	947.7	-2,103.4	2,307.0	0.00	0.00	
5,300.0	30.85	294.26	4,674.9	968.8	-2,150.1	2,358.2	0.00	0.00	
5,400.0	30.85	294.26	4,760.7	989.8	-2,196.9	2,409.5	0.00	0.00	
5,500.0	30.85	294.26	4,846.6	1,010.9	-2,243.6	2,460.8	0.00	0.00	
5,600.0	30.85	294.26	4,932.4	1,032.0	-2,290.4	2,512.1	0.00	0.00	
5,700.0	30.85	294.26	5,018.2	1,053.0	-2,337.1	2,563.4	0.00	0.00	
5,800.0	30.85	294.26	5,104.1	1,074.1	-2,383.9	2,614.6	0.00	0.00	
5,900.0	30.85	294.26	5,189.9	1,095.2	-2,430.6	2,665.9	0.00	0.00	
6,000.0	30.85	294.26	5,275.8	1,116.3	-2,477.4	2,717.2	0.00	0.00	
6,100.0	30.85	294.26	5,361.6	1,137.3	-2,524.2	2,768.5	0.00	0.00	
6,200.0	30.85	294.26	5,447.5	1,158.4	-2,570.9	2,819.8	0.00	0.00	
6,300.0	30.85	294.26	5,533.3	1,179.5	-2,617.7	2,871.1	0.00	0.00	
6,400.0	30.85	294.26	5,619.2	1,200.5	-2,664.4	2,922.3	0.00	0.00	
6,500.0	30.85	294.26	5,705.0	1,221.6	-2,711.2	2,973.6	0.00	0.00	
6,600.0	30.85	294.26	5,790.9	1,242.7	-2,757.9	3,024.9	0.00	0.00	
6,700.0	30.85	294.26	5,876.7	1,263.7	-2,804.7	3,076.2	0.00	0.00	
6,800.0	30.85	294.26	5,962.6	1,284.8	-2,851.4	3,127.5	0.00	0.00	
6,900.0	30.85	294.26	6,048.4	1,305.9	-2,898.2	3,178.7	0.00	0.00	
7,000.0	30.85	294.26	6,134.3	1,326.9	-2,945.0	3,230.0	0.00	0.00	
7,100.0	30.85	294.26	6,220.1	1,348.0	-2,991.7	3,281.3	0.00	0.00	
7,166.9	30.85	294.26	6,277.6	1,362.1	-3,023.0	3,315.6	0.00	0.00	Start Drop -3.00
7,200.0	29.86	294.26	6,306.1	1,369.0	-3,038.2	3,332.3	3.00	-3.00	
7,300.0	26.86	294.26	6,394.1	1,388.5	-3,081.5	3,379.8	3.00	-3.00	
7,400.0	23.86	294.26	6,484.5	1,406.1	-3,120.6	3,422.7	3.00	-3.00	
7,500.0	20.86	294.26	6,576.9	1,421.7	-3,155.3	3,460.7	3.00	-3.00	
7,600.0	17.86	294.26	6,671.3	1,435.3	-3,185.5	3,493.8	3.00	-3.00	
7,700.0	14.86	294.26	6,767.2	1,446.9	-3,211.2	3,522.0	3.00	-3.00	
7,800.0	11.86	294.26	6,864.5	1,456.4	-3,232.2	3,545.1	3.00	-3.00	
7,900.0	8.86	294.26	6,962.9	1,463.7	-3,248.6	3,563.1	3.00	-3.00	
8,000.0	5.86	294.26	7,062.0	1,469.0	-3,260.3	3,575.9	3.00	-3.00	
8,100.0	2.86	294.26	7,161.7	1,472.1	-3,267.2	3,583.5	3.00	-3.00	
8,155.3	1.20	294.26	7,217.0	1,472.9	-3,269.0	3,585.5	3.00	-3.00	WF (TVD)
8,195.3	0.00	0.00	7,257.0	1,473.1	-3,269.4	3,585.9	3.00	-3.00	EOD @ Inc. = 0° - TOG (TVD) - 8508E-21 N22
8,200.0	0.01	239.45	7,261.7	1,473.1	-3,269.4	3,585.9	0.25	0.25	
8,300.0	0.26	239.45	7,361.7	1,473.0	-3,269.6	3,586.0	0.25	0.25	
8,320.9	0.31	239.45	7,382.6	1,472.9	-3,269.7	3,586.1	0.25	0.25	
8,400.0	0.31	239.45	7,461.7	1,472.7	-3,270.1	3,586.3	0.00	0.00	
8,500.0	0.31	239.45	7,561.7	1,472.4	-3,270.5	3,586.6	0.00	0.00	
8,600.0	0.31	239.45	7,661.7	1,472.2	-3,271.0	3,587.0	0.00	0.00	
8,700.0	0.31	239.45	7,761.7	1,471.9	-3,271.5	3,587.3	0.00	0.00	
8,800.0	0.31	239.45	7,861.7	1,471.6	-3,272.0	3,587.6	0.00	0.00	
8,900.0	0.31	239.45	7,961.7	1,471.3	-3,272.4	3,587.9	0.00	0.00	
9,000.0	0.31	239.45	8,061.7	1,471.0	-3,272.9	3,588.2	0.00	0.00	
9,100.0	0.31	239.45	8,161.7	1,470.8	-3,273.4	3,588.6	0.00	0.00	
9,200.0	0.31	239.45	8,261.7	1,470.5	-3,273.8	3,588.9	0.00	0.00	
9,300.0	0.31	239.45	8,361.7	1,470.2	-3,274.3	3,589.2	0.00	0.00	
9,400.0	0.31	239.45	8,461.7	1,469.9	-3,274.8	3,589.5	0.00	0.00	

Cathedral Energy

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well 8508E-21 N22 496
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7602.0ft (Original Well Elev)
Project:	Story Gulch	MD Reference:	WELL @ 7602.0ft (Original Well Elev)
Site:	S22-T4S-R96W (N22 496) (Column Pattern)	North Reference:	True
Well:	8508E-21 N22 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,500.0	0.31	239.45	8,561.7	1,469.6	-3,275.3	3,589.8	0.00	0.00	
9,600.0	0.31	239.45	8,661.7	1,469.4	-3,275.7	3,590.1	0.00	0.00	
9,700.0	0.31	239.45	8,761.7	1,469.1	-3,276.2	3,590.5	0.00	0.00	
9,800.0	0.31	239.45	8,861.7	1,468.8	-3,276.7	3,590.8	0.00	0.00	
9,900.0	0.31	239.45	8,961.7	1,468.5	-3,277.1	3,591.1	0.00	0.00	
10,000.0	0.31	239.45	9,061.7	1,468.3	-3,277.6	3,591.4	0.00	0.00	
10,100.0	0.31	239.45	9,161.7	1,468.0	-3,278.1	3,591.7	0.00	0.00	
10,200.0	0.31	239.45	9,261.7	1,467.7	-3,278.6	3,592.1	0.00	0.00	
10,300.0	0.31	239.45	9,361.7	1,467.4	-3,279.0	3,592.4	0.00	0.00	
10,400.0	0.31	239.45	9,461.7	1,467.1	-3,279.5	3,592.7	0.00	0.00	
10,500.0	0.31	239.45	9,561.7	1,466.9	-3,280.0	3,593.0	0.00	0.00	
10,600.0	0.31	239.45	9,661.7	1,466.6	-3,280.5	3,593.3	0.00	0.00	
10,700.0	0.31	239.45	9,761.6	1,466.3	-3,280.9	3,593.7	0.00	0.00	
10,800.0	0.31	239.45	9,861.6	1,466.0	-3,281.4	3,594.0	0.00	0.00	
10,900.0	0.31	239.45	9,961.6	1,465.7	-3,281.9	3,594.3	0.00	0.00	
11,000.0	0.31	239.45	10,061.6	1,465.5	-3,282.3	3,594.6	0.00	0.00	
11,100.0	0.31	239.45	10,161.6	1,465.2	-3,282.8	3,594.9	0.00	0.00	
11,200.0	0.31	239.45	10,261.6	1,464.9	-3,283.3	3,595.2	0.00	0.00	
11,300.0	0.31	239.45	10,361.6	1,464.6	-3,283.8	3,595.6	0.00	0.00	
11,400.0	0.31	239.45	10,461.6	1,464.4	-3,284.2	3,595.9	0.00	0.00	
11,500.0	0.31	239.45	10,561.6	1,464.1	-3,284.7	3,596.2	0.00	0.00	
11,600.0	0.31	239.45	10,661.6	1,463.8	-3,285.2	3,596.5	0.00	0.00	
11,700.0	0.31	239.45	10,761.6	1,463.5	-3,285.6	3,596.8	0.00	0.00	
11,800.0	0.31	239.45	10,861.6	1,463.2	-3,286.1	3,597.2	0.00	0.00	
11,855.4	0.31	239.45	10,917.0	1,463.1	-3,286.4	3,597.3	0.00	0.00	Rins (TVD) - 8508E-21 N22 496 PBHL (Column
11,900.0	0.31	239.45	10,961.6	1,463.0	-3,286.6	3,597.5	0.00	0.00	
12,000.0	0.31	239.45	11,061.6	1,462.7	-3,287.1	3,597.8	0.00	0.00	
12,100.0	0.31	239.45	11,161.6	1,462.4	-3,287.5	3,598.1	0.00	0.00	
12,185.4	0.31	239.45	11,247.0	1,462.2	-3,287.9	3,598.4	0.00	0.00	Cozz (TVD)
12,200.0	0.31	239.45	11,261.6	1,462.1	-3,288.0	3,598.4	0.00	0.00	
12,300.0	0.31	239.45	11,361.6	1,461.8	-3,288.5	3,598.8	0.00	0.00	
12,375.4	0.31	239.45	11,437.0	1,461.6	-3,288.8	3,599.0	0.00	0.00	Corc (TVD)
12,400.0	0.31	239.45	11,461.6	1,461.6	-3,288.9	3,599.1	0.00	0.00	
12,500.0	0.31	239.45	11,561.6	1,461.3	-3,289.4	3,599.4	0.00	0.00	
12,600.0	0.31	239.45	11,661.6	1,461.0	-3,289.9	3,599.7	0.00	0.00	
12,655.4	0.31	239.45	11,717.0	1,460.9	-3,290.1	3,599.9	0.00	0.00	Sego (TVD)
12,700.0	0.31	239.45	11,761.6	1,460.7	-3,290.4	3,600.0	0.00	0.00	
12,800.0	0.31	239.45	11,861.6	1,460.5	-3,290.8	3,600.3	0.00	0.00	
12,855.4	0.31	239.45	11,917.0	1,460.3	-3,291.1	3,600.5	0.00	0.00	L Sego (TVD)
12,900.0	0.31	239.45	11,961.6	1,460.2	-3,291.3	3,600.7	0.00	0.00	
13,000.0	0.31	239.45	12,061.6	1,459.9	-3,291.8	3,601.0	0.00	0.00	
13,100.0	0.31	239.45	12,161.6	1,459.6	-3,292.2	3,601.3	0.00	0.00	
13,105.4	0.31	239.45	12,167.0	1,459.6	-3,292.3	3,601.3	0.00	0.00	Drillers TD @ 13,105' MD
13,200.0	0.31	239.45	12,261.6	1,459.3	-3,292.7	3,601.6	0.00	0.00	
13,300.0	0.31	239.45	12,361.6	1,459.1	-3,293.2	3,601.9	0.00	0.00	
13,355.4	0.31	239.45	12,417.0	1,458.9	-3,293.5	3,602.1	0.00	0.00	

Cathedral Energy

Planning Report

Database:	EDM 5000.1 US Multi Users DB	Local Co-ordinate Reference:	Well 8508E-21 N22 496
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 7602.0ft (Original Well Elev)
Project:	Story Gulch	MD Reference:	WELL @ 7602.0ft (Original Well Elev)
Site:	S22-T4S-R96W (N22 496) (Column Pattern)	North Reference:	True
Well:	8508E-21 N22 496	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
8508E-21 N22 496 TGT	0.00	0.00	7,257.0	1,473.1	-3,269.4	1,686,543.59	2,249,049.48	39° 41' 17.06 N	108° 10' 7.45 W
- plan hits target center									
- Point									
8508E-21 N22 496 PBH	0.00	0.00	10,917.0	1,463.1	-3,286.4	1,686,534.07	2,249,032.22	39° 41' 16.96 N	108° 10' 7.66 W
- plan hits target center									
- Rectangle (sides W30.0 H50.0 D0.0)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
217.0	217.0	Para Creek (TVD)				
518.5	517.0	Mahog Bench (TVD)				
579.5	577.0	Base B Groove (TVD)				
4,650.2	4,117.0	Was G (TVD)				
8,155.3	7,217.0	WF (TVD)				
8,195.3	7,257.0	TOG (TVD)				
11,855.4	10,917.0	Rlms (TVD)				
12,185.4	11,247.0	Cozz (TVD)				
12,375.4	11,437.0	Corc (TVD)				
12,655.4	11,717.0	Sego (TVD)				
12,855.4	11,917.0	L Sego (TVD)				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
1,228.4	1,179.4	111.0	-246.4	EOB @ Inc. = 30.85°
7,166.9	6,277.6	1,362.1	-3,023.0	Start Drop -3.00
8,195.3	7,257.0	1,473.1	-3,269.4	EOD @ Inc. = 0°
13,105.4	12,167.0	1,472.9	-3,269.7	Drillers TD @ 13,105' MD
13,355.4	12,417.0	1,463.1	-3,286.4	Permit TD @ 13,355' MD