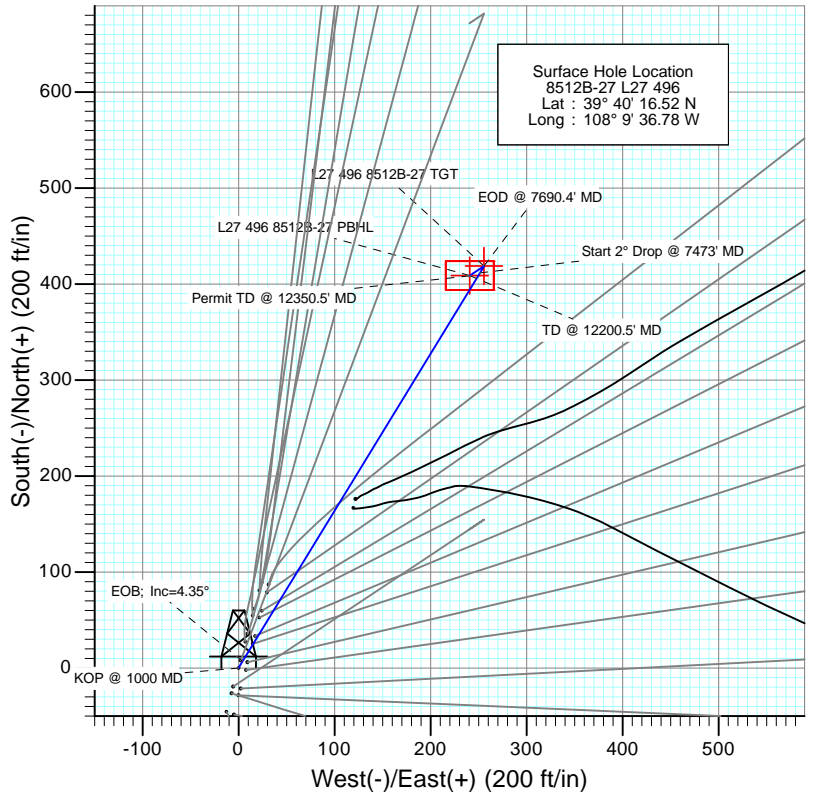


SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1217.4	4.35	31.42	1217.2	7.0	4.3	2.00	31.42	8.2	
4	7473.0	4.35	31.42	7454.8	411.8	251.5	0.00	0.00	482.4	
5	7690.4	0.00	0.00	7672.0	418.8	255.8	2.00	180.00	490.7	L27 496 8512B-27 TGT
6	7782.8	0.23	236.24	7764.4	418.7	255.6	0.25	236.24	490.5	
7	12200.5	0.23	236.24	12182.0	408.8	240.8	0.00	0.00	474.5	L27 496 8512B-27 PBHL
8	12350.5	0.23	236.24	12332.0	408.5	240.3	0.00	0.00	473.9	



Surface Hole Location  
 8512B-27 L27 496  
 Lat : 39° 40' 16.52 N  
 Long : 108° 9' 36.78 W

DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
L27 496 8512B-27 TGT	418.8	255.8	1680761.37	2251534.3839° 40' 20.66 N	108° 9' 33.51 W	
L27 496 8512B-27 PBHL	408.8	240.8	1680751.81	2251519.1339° 40' 20.56 N	108° 9' 33.70 W	

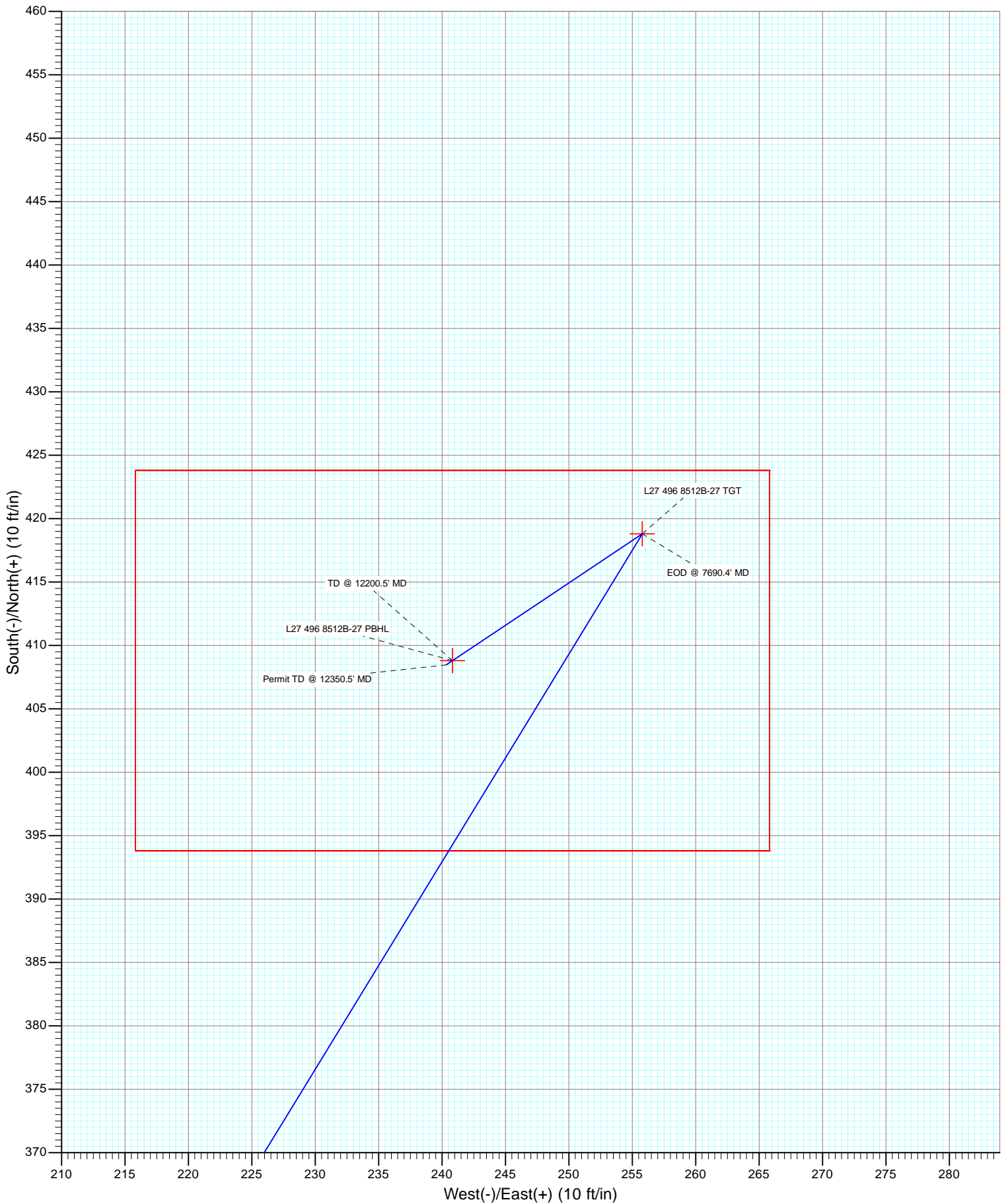
TVDPath	MDPath	Formation
1105.0	1105.0	A_GROOVE_TVD
1261.0	1261.3	B_GROOVE_TVD
1289.0	1289.4	B_GROOVE_BASE_TVD
2227.0	2230.1	GARDEN_GULCH_TVD
3222.0	3228.0	WASATCH_FM_TVD
5439.0	5451.4	WASATCH_G_TVD
7632.0	7650.4	WILLIAMS_FORK_TVD
7672.0	7690.4	TOG_TVD
10851.0	10869.4	CAMEO_TVD
11301.0	11319.4	ROLLINS_TVD
11548.0	11566.5	COZZETTE_TVD
11731.0	11749.5	CORCORAN_TVD
12032.0	12050.5	UPPER_SEGO_TVD
12182.0	12200.5	SEGO_BASE_TARGET_TVD

**M** Azimuths to True North  
 Magnetic North: 10.28°  
 Magnetic Field  
 Strength: 52177.9snT  
 Dip Angle: 65.82°  
 Date: 9/24/2012  
 Model: IGRF2010

Plan #1  
 8512B-27 L27 496  
 12xxx; LR  
 Well @ 8136.0ft (Rig)  
 Ground Elevation @ 8104.0  
 North American Datum 1983  
 Well 8512B-27 L27 496, True North



Project: Story Gulch  
Site: S27-T4S-R96W (L27 496)  
Well: 8512B-27 L27 496  
Wellbore: DD  
Design: Plan #1



# Cathedral Energy Services

## Planning Report

<b>Database:</b> USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b> Well 8512B-27 L27 496
<b>Company:</b> EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b> Well @ 8136.0ft (Rig)
<b>Project:</b> Story Gulch	<b>MD Reference:</b> Well @ 8136.0ft (Rig)
<b>Site:</b> S27-T4S-R96W (L27 496)	<b>North Reference:</b> True
<b>Well:</b> 8512B-27 L27 496	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> DD	
<b>Design:</b> Plan #1	

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

<b>Site</b> S27-T4S-R96W (L27 496)					
<b>Site Position:</b>		<b>Northing:</b>	1,680,404.44 ft	<b>Latitude:</b>	39° 40' 17.06 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,251,282.88 ft	<b>Longitude:</b>	108° 9' 36.59 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	-1.68 °

<b>Well</b> 8512B-27 L27 496						
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,680,350.24 ft	<b>Latitude:</b>	39° 40' 16.52 N
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,251,266.43 ft	<b>Longitude:</b>	108° 9' 36.78 W
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	8,104.0 ft

<b>Wellbore</b> DD					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF2010	9/24/2012	(°) 10.28	(°) 65.82	(nT) 52,178

<b>Design</b> Plan #1					
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	30.50	

<b>Plan Sections</b>										
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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,217.4	4.35	31.42	1,217.2	7.0	4.3	2.00	2.00	0.00	31.42	
7,473.0	4.35	31.42	7,454.8	411.8	251.5	0.00	0.00	0.00	0.00	
7,690.4	0.00	0.00	7,672.0	418.8	255.8	2.00	-2.00	0.00	180.00	L27 496 8512B-27 TC
7,782.8	0.23	236.24	7,764.4	418.7	255.6	0.25	0.25	-133.90	236.24	
12,200.5	0.23	236.24	12,182.0	408.8	240.8	0.00	0.00	0.00	0.00	L27 496 8512B-27 PE
12,350.5	0.23	236.24	12,332.0	408.5	240.3	0.00	0.00	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8512B-27 L27 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	Well @ 8136.0ft (Rig)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	Well @ 8136.0ft (Rig)
<b>Site:</b>	S27-T4S-R96W (L27 496)	<b>North Reference:</b>	True
<b>Well:</b>	8512B-27 L27 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	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	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 1000 MD
1,100.0	2.00	31.42	1,100.0	1.5	0.9	1.7	2.00	2.00	
1,105.0	2.10	31.42	1,105.0	1.6	1.0	1.9	2.00	2.00	A_GROOVE_TVD
1,200.0	4.00	31.42	1,199.8	6.0	3.6	7.0	2.00	2.00	
1,217.4	4.35	31.42	1,217.2	7.0	4.3	8.2	2.00	2.00	EOB; Inc=4.35°
1,261.3	4.35	31.42	1,261.0	9.9	6.0	11.6	0.00	0.00	B_GROOVE_TVD
1,289.4	4.35	31.42	1,289.0	11.7	7.1	13.7	0.00	0.00	B_GROOVE_BASE_TVD
1,300.0	4.35	31.42	1,299.6	12.4	7.6	14.5	0.00	0.00	
1,400.0	4.35	31.42	1,399.3	18.9	11.5	22.1	0.00	0.00	
1,500.0	4.35	31.42	1,499.0	25.3	15.5	29.7	0.00	0.00	
1,600.0	4.35	31.42	1,598.7	31.8	19.4	37.2	0.00	0.00	
1,700.0	4.35	31.42	1,698.4	38.3	23.4	44.8	0.00	0.00	
1,800.0	4.35	31.42	1,798.1	44.7	27.3	52.4	0.00	0.00	
1,900.0	4.35	31.42	1,897.8	51.2	31.3	60.0	0.00	0.00	
2,000.0	4.35	31.42	1,997.5	57.7	35.2	67.6	0.00	0.00	
2,100.0	4.35	31.42	2,097.3	64.1	39.2	75.1	0.00	0.00	
2,200.0	4.35	31.42	2,197.0	70.6	43.1	82.7	0.00	0.00	
2,230.1	4.35	31.42	2,227.0	72.6	44.3	85.0	0.00	0.00	GARDEN_GULCH_TVD.
2,300.0	4.35	31.42	2,296.7	77.1	47.1	90.3	0.00	0.00	
2,400.0	4.35	31.42	2,396.4	83.5	51.0	97.9	0.00	0.00	
2,500.0	4.35	31.42	2,496.1	90.0	55.0	105.5	0.00	0.00	
2,600.0	4.35	31.42	2,595.8	96.5	58.9	113.0	0.00	0.00	
2,700.0	4.35	31.42	2,695.5	103.0	62.9	120.6	0.00	0.00	
2,800.0	4.35	31.42	2,795.2	109.4	66.8	128.2	0.00	0.00	
2,900.0	4.35	31.42	2,894.9	115.9	70.8	135.8	0.00	0.00	
3,000.0	4.35	31.42	2,994.7	122.4	74.7	143.4	0.00	0.00	
3,100.0	4.35	31.42	3,094.4	128.8	78.7	151.0	0.00	0.00	
3,200.0	4.35	31.42	3,194.1	135.3	82.6	158.5	0.00	0.00	
3,228.0	4.35	31.42	3,222.0	137.1	83.8	160.7	0.00	0.00	WASATCH_FM_TVD
3,300.0	4.35	31.42	3,293.8	141.8	86.6	166.1	0.00	0.00	
3,400.0	4.35	31.42	3,393.5	148.2	90.5	173.7	0.00	0.00	
3,500.0	4.35	31.42	3,493.2	154.7	94.5	181.3	0.00	0.00	
3,600.0	4.35	31.42	3,592.9	161.2	98.5	188.9	0.00	0.00	
3,700.0	4.35	31.42	3,692.6	167.7	102.4	196.4	0.00	0.00	
3,800.0	4.35	31.42	3,792.4	174.1	106.4	204.0	0.00	0.00	
3,900.0	4.35	31.42	3,892.1	180.6	110.3	211.6	0.00	0.00	
4,000.0	4.35	31.42	3,991.8	187.1	114.3	219.2	0.00	0.00	
4,100.0	4.35	31.42	4,091.5	193.5	118.2	226.8	0.00	0.00	
4,200.0	4.35	31.42	4,191.2	200.0	122.2	234.3	0.00	0.00	
4,300.0	4.35	31.42	4,290.9	206.5	126.1	241.9	0.00	0.00	
4,400.0	4.35	31.42	4,390.6	212.9	130.1	249.5	0.00	0.00	
4,500.0	4.35	31.42	4,490.3	219.4	134.0	257.1	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8512B-27 L27 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	Well @ 8136.0ft (Rig)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	Well @ 8136.0ft (Rig)
<b>Site:</b>	S27-T4S-R96W (L27 496)	<b>North Reference:</b>	True
<b>Well:</b>	8512B-27 L27 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	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
4,600.0	4.35	31.42	4,590.1	225.9	138.0	264.7	0.00	0.00	
4,700.0	4.35	31.42	4,689.8	232.4	141.9	272.2	0.00	0.00	
4,800.0	4.35	31.42	4,789.5	238.8	145.9	279.8	0.00	0.00	
4,900.0	4.35	31.42	4,889.2	245.3	149.8	287.4	0.00	0.00	
5,000.0	4.35	31.42	4,988.9	251.8	153.8	295.0	0.00	0.00	
5,100.0	4.35	31.42	5,088.6	258.2	157.7	302.6	0.00	0.00	
5,200.0	4.35	31.42	5,188.3	264.7	161.7	310.1	0.00	0.00	
5,300.0	4.35	31.42	5,288.0	271.2	165.6	317.7	0.00	0.00	
5,400.0	4.35	31.42	5,387.8	277.6	169.6	325.3	0.00	0.00	
5,451.4	4.35	31.42	5,439.0	281.0	171.6	329.2	0.00	0.00	WASATCH_G_TVD
5,500.0	4.35	31.42	5,487.5	284.1	173.5	332.9	0.00	0.00	
5,600.0	4.35	31.42	5,587.2	290.6	177.5	340.5	0.00	0.00	
5,700.0	4.35	31.42	5,686.9	297.1	181.4	348.0	0.00	0.00	
5,800.0	4.35	31.42	5,786.6	303.5	185.4	355.6	0.00	0.00	
5,900.0	4.35	31.42	5,886.3	310.0	189.3	363.2	0.00	0.00	
6,000.0	4.35	31.42	5,986.0	316.5	193.3	370.8	0.00	0.00	
6,100.0	4.35	31.42	6,085.7	322.9	197.2	378.4	0.00	0.00	
6,200.0	4.35	31.42	6,185.5	329.4	201.2	385.9	0.00	0.00	
6,300.0	4.35	31.42	6,285.2	335.9	205.1	393.5	0.00	0.00	
6,400.0	4.35	31.42	6,384.9	342.3	209.1	401.1	0.00	0.00	
6,500.0	4.35	31.42	6,484.6	348.8	213.1	408.7	0.00	0.00	
6,600.0	4.35	31.42	6,584.3	355.3	217.0	416.3	0.00	0.00	
6,700.0	4.35	31.42	6,684.0	361.8	221.0	423.8	0.00	0.00	
6,800.0	4.35	31.42	6,783.7	368.2	224.9	431.4	0.00	0.00	
6,900.0	4.35	31.42	6,883.4	374.7	228.9	439.0	0.00	0.00	
7,000.0	4.35	31.42	6,983.1	381.2	232.8	446.6	0.00	0.00	
7,100.0	4.35	31.42	7,082.9	387.6	236.8	454.2	0.00	0.00	
7,200.0	4.35	31.42	7,182.6	394.1	240.7	461.7	0.00	0.00	
7,300.0	4.35	31.42	7,282.3	400.6	244.7	469.3	0.00	0.00	
7,400.0	4.35	31.42	7,382.0	407.0	248.6	476.9	0.00	0.00	
7,473.0	4.35	31.42	7,454.8	411.8	251.5	482.4	0.00	0.00	Start 2° Drop @ 7473' MD
7,500.0	3.81	31.42	7,481.7	413.4	252.5	484.4	2.00	-2.00	
7,600.0	1.81	31.42	7,581.6	417.6	255.1	489.3	2.00	-2.00	
7,650.4	0.80	31.42	7,632.0	418.6	255.7	490.4	2.00	-2.00	WILLIAMS_FORK_TVD
7,690.4	0.00	0.00	7,672.0	418.8	255.8	490.7	2.00	-2.00	EOD @ 7690.4' MD - TOG TVD
7,700.0	0.02	236.24	7,681.6	418.8	255.8	490.7	0.25	0.25	
7,782.8	0.23	236.24	7,764.4	418.7	255.6	490.5	0.00	0.00	
7,800.0	0.23	236.24	7,781.6	418.7	255.6	490.5	0.00	0.00	
7,900.0	0.23	236.24	7,881.6	418.4	255.3	490.1	0.00	0.00	
8,000.0	0.23	236.24	7,981.6	418.2	254.9	489.7	0.00	0.00	
8,100.0	0.23	236.24	8,081.6	418.0	254.6	489.4	0.00	0.00	
8,200.0	0.23	236.24	8,181.6	417.8	254.2	489.0	0.00	0.00	
8,300.0	0.23	236.24	8,281.6	417.5	253.9	488.6	0.00	0.00	
8,400.0	0.23	236.24	8,381.6	417.3	253.6	488.3	0.00	0.00	
8,500.0	0.23	236.24	8,481.6	417.1	253.2	487.9	0.00	0.00	
8,600.0	0.23	236.24	8,581.6	416.9	252.9	487.5	0.00	0.00	
8,700.0	0.23	236.24	8,681.6	416.6	252.6	487.2	0.00	0.00	
8,800.0	0.23	236.24	8,781.6	416.4	252.2	486.8	0.00	0.00	
8,900.0	0.23	236.24	8,881.6	416.2	251.9	486.5	0.00	0.00	
9,000.0	0.23	236.24	8,981.6	416.0	251.6	486.1	0.00	0.00	
9,100.0	0.23	236.24	9,081.6	415.7	251.2	485.7	0.00	0.00	
9,200.0	0.23	236.24	9,181.6	415.5	250.9	485.4	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8512B-27 L27 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	Well @ 8136.0ft (Rig)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	Well @ 8136.0ft (Rig)
<b>Site:</b>	S27-T4S-R96W (L27 496)	<b>North Reference:</b>	True
<b>Well:</b>	8512B-27 L27 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	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
9,300.0	0.23	236.24	9,281.6	415.3	250.6	485.0	0.00	0.00	
9,400.0	0.23	236.24	9,381.6	415.1	250.2	484.6	0.00	0.00	
9,500.0	0.23	236.24	9,481.6	414.9	249.9	484.3	0.00	0.00	
9,600.0	0.23	236.24	9,581.6	414.6	249.6	483.9	0.00	0.00	
9,700.0	0.23	236.24	9,681.6	414.4	249.2	483.6	0.00	0.00	
9,800.0	0.23	236.24	9,781.6	414.2	248.9	483.2	0.00	0.00	
9,900.0	0.23	236.24	9,881.6	414.0	248.5	482.8	0.00	0.00	
10,000.0	0.23	236.24	9,981.6	413.7	248.2	482.5	0.00	0.00	
10,100.0	0.23	236.24	10,081.6	413.5	247.9	482.1	0.00	0.00	
10,200.0	0.23	236.24	10,181.6	413.3	247.5	481.7	0.00	0.00	
10,300.0	0.23	236.24	10,281.6	413.1	247.2	481.4	0.00	0.00	
10,400.0	0.23	236.24	10,381.6	412.8	246.9	481.0	0.00	0.00	
10,500.0	0.23	236.24	10,481.6	412.6	246.5	480.6	0.00	0.00	
10,600.0	0.23	236.24	10,581.6	412.4	246.2	480.3	0.00	0.00	
10,700.0	0.23	236.24	10,681.6	412.2	245.9	479.9	0.00	0.00	
10,800.0	0.23	236.24	10,781.6	411.9	245.5	479.6	0.00	0.00	
10,869.4	0.23	236.24	10,851.0	411.8	245.3	479.3	0.00	0.00	CAMEO_TVD
10,900.0	0.23	236.24	10,881.6	411.7	245.2	479.2	0.00	0.00	
11,000.0	0.23	236.24	10,981.6	411.5	244.9	478.8	0.00	0.00	
11,100.0	0.23	236.24	11,081.6	411.3	244.5	478.5	0.00	0.00	
11,200.0	0.23	236.24	11,181.6	411.0	244.2	478.1	0.00	0.00	
11,300.0	0.23	236.24	11,281.6	410.8	243.9	477.7	0.00	0.00	
11,319.4	0.23	236.24	11,301.0	410.8	243.8	477.7	0.00	0.00	ROLLINS_TVD
11,400.0	0.23	236.24	11,381.5	410.6	243.5	477.4	0.00	0.00	
11,500.0	0.23	236.24	11,481.5	410.4	243.2	477.0	0.00	0.00	
11,566.5	0.23	236.24	11,548.0	410.2	243.0	476.8	0.00	0.00	COZZETTE_TVD
11,600.0	0.23	236.24	11,581.5	410.1	242.8	476.6	0.00	0.00	
11,700.0	0.23	236.24	11,681.5	409.9	242.5	476.3	0.00	0.00	
11,749.5	0.23	236.24	11,731.0	409.8	242.3	476.1	0.00	0.00	CORCORAN_TVD
11,800.0	0.23	236.24	11,781.5	409.7	242.2	475.9	0.00	0.00	
11,900.0	0.23	236.24	11,881.5	409.5	241.8	475.6	0.00	0.00	
12,000.0	0.23	236.24	11,981.5	409.2	241.5	475.2	0.00	0.00	
12,050.5	0.23	236.24	12,032.0	409.1	241.3	475.0	0.00	0.00	UPPER_SEGO_TVD
12,100.0	0.23	236.24	12,081.5	409.0	241.2	474.8	0.00	0.00	
12,200.0	0.23	236.24	12,181.5	408.8	240.8	474.5	0.00	0.00	
12,200.5	0.23	236.24	12,182.0	408.8	240.8	474.5	0.00	0.00	TD @ 12200.5' MD - SEGO_BASE_TARGET_1
12,300.0	0.23	236.24	12,281.5	408.6	240.5	474.1	0.00	0.00	
12,350.5	0.23	236.24	12,332.0	408.5	240.3	473.9	0.00	0.00	Permit TD @ 12350.5' MD

Targets											
Target Name	- hit/miss target	- Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
L27 496 8512B-27 TGT			0.00	0.00	7,672.0	418.8	255.8	1,680,761.37	2,251,534.38	39° 40' 20.66 N	108° 9' 33.51 W
- plan hits target center											
- Point											
L27 496 8512B-27 PBHI			0.00	0.00	12,182.0	408.8	240.8	1,680,751.81	2,251,519.13	39° 40' 20.56 N	108° 9' 33.70 W
- plan hits target center											
- Rectangle (sides W30.0 H50.0 D0.0)											

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8512B-27 L27 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	Well @ 8136.0ft (Rig)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	Well @ 8136.0ft (Rig)
<b>Site:</b>	S27-T4S-R96W (L27 496)	<b>North Reference:</b>	True
<b>Well:</b>	8512B-27 L27 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,105.0	1,105.0	A_GROOVE_TVD				
1,261.3	1,261.0	B_GROOVE_TVD				
1,289.4	1,289.0	B_GROOVE_BASE_TVD				
2,230.1	2,227.0	GARDEN_GULCH_TVD.				
3,228.0	3,222.0	WASATCH_FM_TVD				
5,451.4	5,439.0	WASATCH_G_TVD				
7,650.4	7,632.0	WILLIAMS_FORK_TVD				
7,690.4	7,672.0	TOG TVD				
10,869.4	10,851.0	CAMEO_TVD				
11,319.4	11,301.0	ROLLINS_TVD				
11,566.5	11,548.0	COZZETTE_TVD				
11,749.5	11,731.0	CORCORAN_TVD				
12,050.5	12,032.0	UPPER_SEGO_TVD				
12,200.5	12,182.0	SEGO_BASE_TARGET_TVD				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,000.0	1,000.0	0.0	0.0	KOP @ 1000 MD	
1,217.4	1,217.2	7.0	4.3	EOB; Inc=4.35°	
7,473.0	7,454.8	411.8	251.5	Start 2° Drop @ 7473' MD	
7,690.4	7,672.0	418.8	255.8	EOD @ 7690.4' MD	
12,200.5	12,182.0	418.7	255.6	TD @ 12200.5' MD	
12,350.5	12,332.0	408.8	240.8	Permit TD @ 12350.5' MD	