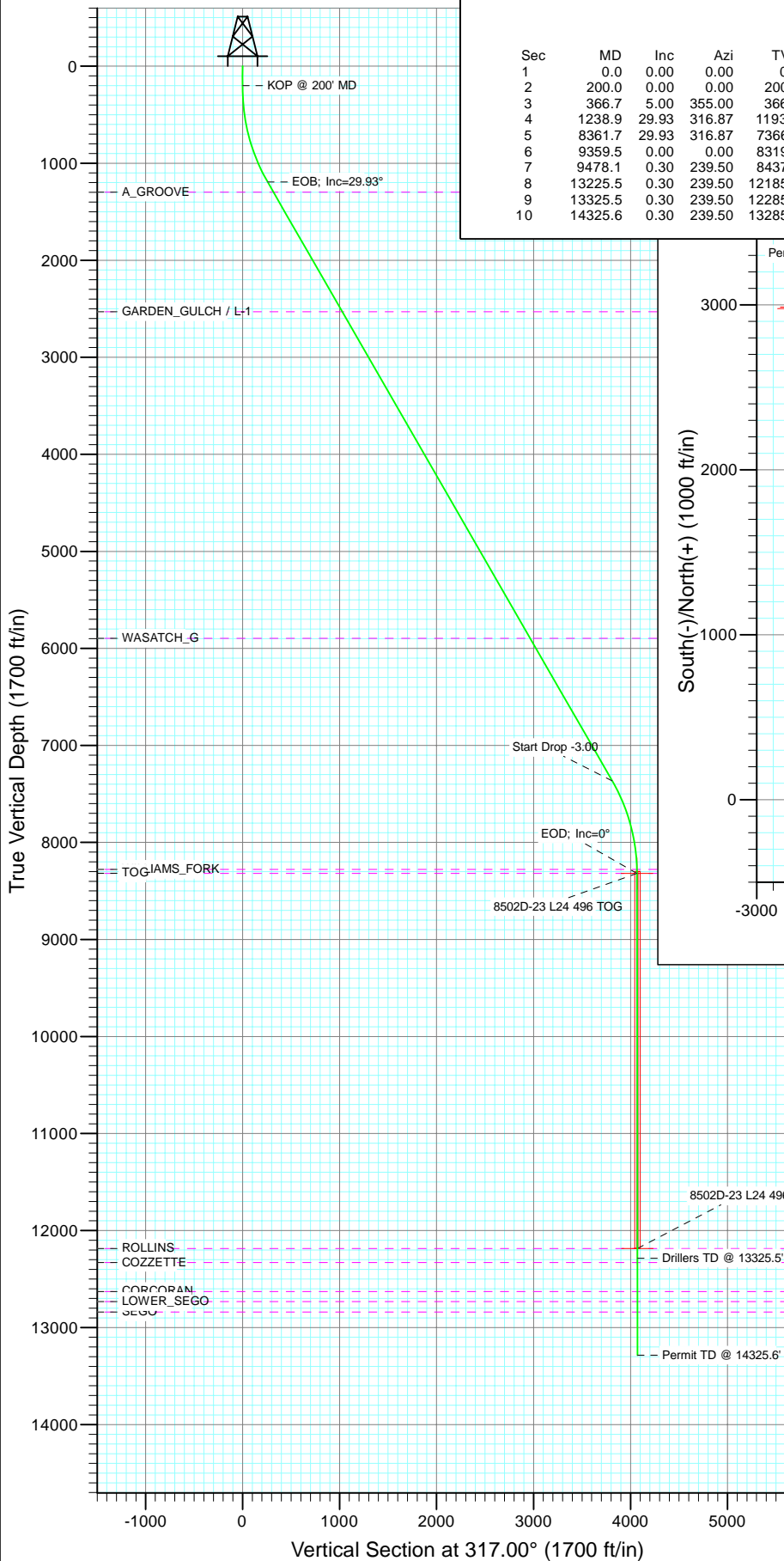


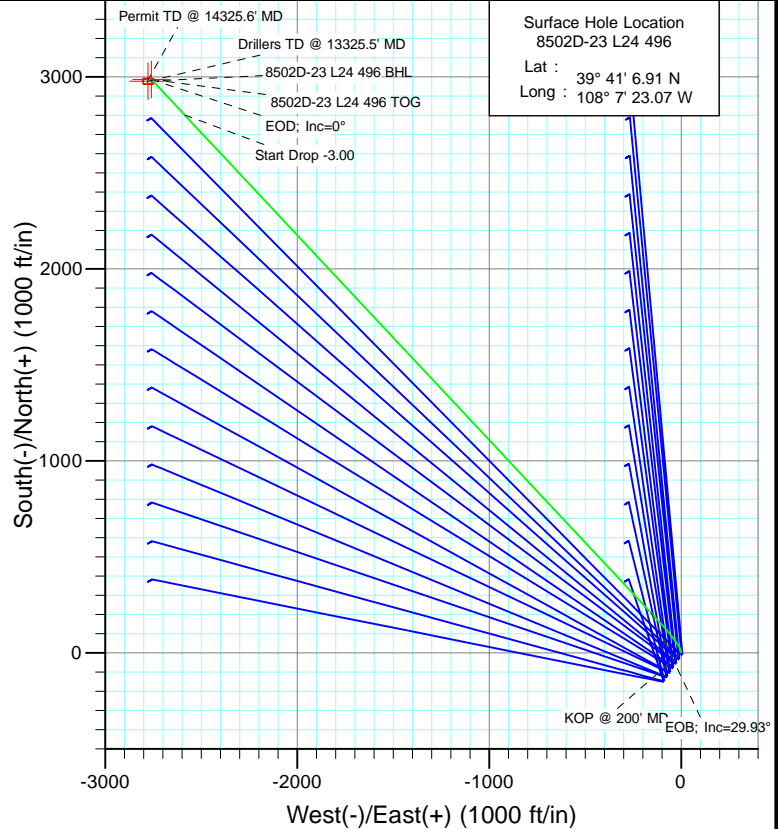


Project: Story Gulch  
Site: L24 496  
Well: 8502D-23 L24 496  
Wellbore: DD  
Design: Plan #1



#### 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	366.7	5.00	355.00	366.5	7.2	-0.6	3.00	355.00	5.7	
4	1238.9	29.93	316.87	1193.2	207.4	-155.4	3.00	-44.33	257.7	
5	8361.7	29.93	316.87	7366.0	2801.1	-2585.4	0.00	0.00	3811.8	
6	9359.5	0.00	0.00	8319.0	2987.0	-2759.6	3.00	180.00	4066.6	8502D-23 L24 496 TOG
7	9478.1	0.30	239.50	8437.6	2986.8	-2759.9	0.25	239.50	4066.7	
8	13225.5	0.30	239.50	12185.0	2977.0	-2776.6	0.00	0.00	4070.9	8502D-23 L24 496 BHL
9	13325.5	0.30	239.50	12285.0	2976.7	-2777.0	0.00	0.00	4071.0	
10	14325.6	0.30	239.50	13285.0	2974.1	-2781.5	0.00	0.00	4072.1	



Azimuths to True North  
Magnetic North: 10.44°

Magnetic Field  
Strength: 52326.6nT  
Dip Angle: 65.87°  
Date: 5/17/2011  
Model: IGRF2010

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1298.0	1359.7	A_GROOVE
2530.0	2781.4	GARDEN_GULCH / L-1
5897.0	6666.6	WASATCH_G
8279.0	9319.5	WILLIAMS_FORK
8319.0	9359.5	TOG
12185.0	13225.5	ROLLINS
12330.0	13370.5	COZZETTE
12629.0	13669.5	CORCORAN
12733.0	13773.5	LOWER_SEGO
12840.0	13880.6	SEGO

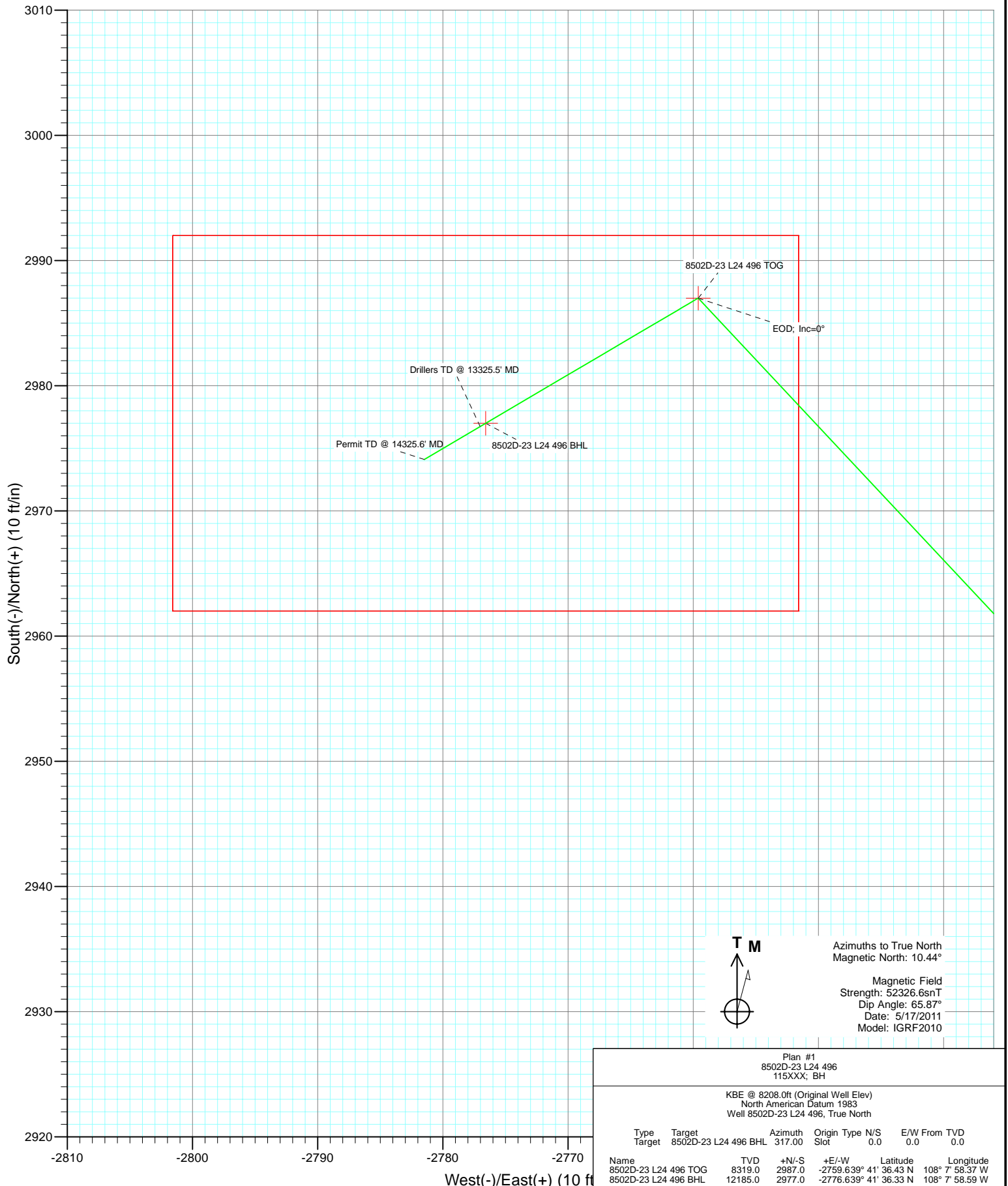
Plan #1  
8502D-23 L24 496  
115XXX; BH

KBE @ 8208.0ft (Original Well Elev)  
North American Datum 1983  
Well 8502D-23 L24 496, True North

Type	Target	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD
	Target	8502D-23 L24 496 BHL	317.00	Slot		0.0	0.0		0.0
Name									
8502D-23 L24 496 TOG			8319.0	2987.0	+N/-S	-2759.639° 41'	36.43 N	108° 7' 58.37 W	
8502D-23 L24 496 BHL			12185.0	2977.0	+E/-W	-2776.639° 41'	36.33 N	108° 7' 58.59 W	



Project: Story Gulch  
 Site: L24 496  
 Well: 8502D-23 L24 496  
 Wellbore: DD  
 Design: Plan #1



Azimuths to True North  
 Magnetic North: 10.44°

Magnetic Field  
 Strength: 52326.6snT  
 Dip Angle: 65.87°  
 Date: 5/17/2011  
 Model: IGRF2010

Plan #1 8502D-23 L24 496 115XXX; BH							
KBE @ 8208.0ft (Original Well Elev) North American Datum 1983 Well 8502D-23 L24 496, True North							
Type	Target	Target	Azimuth	Origin	Type	N/S	E/W From
Target	8502D-23 L24 496 BHL		317.00	Slot		0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude		
8502D-23 L24 496 TOG	8319.0	2987.0	-2759.639° 41'	36.43 N	108° 7' 58.37 W		
8502D-23 L24 496 BHL	12185.0	2977.0	-2776.639° 41'	36.33 N	108° 7' 58.59 W		

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8502D-23 L24 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 8208.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	KBE @ 8208.0ft (Original Well Elev)
<b>Site:</b>	L24 496	<b>North Reference:</b>	True
<b>Well:</b>	8502D-23 L24 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>	L24 496			
<b>Site Position:</b>		<b>Northing:</b>	1,685,024.52 ft	<b>Latitude:</b> 39° 41' 5.72 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,261,789.15 ft	<b>Longitude:</b> 108° 7' 23.99 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.65 °

<b>Well</b>	8502D-23 L24 496			
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,685,142.79 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,261,864.52 ft
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft
			<b>Ground Level:</b>	8,193.0 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 (nT)</b>
	IGRF2010	5/17/2011	10.44	65.87	52,327

<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	317.00

<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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
366.7	5.00	355.00	366.5	7.2	-0.6	3.00	3.00	0.00	355.00	
1,238.9	29.93	316.87	1,193.2	207.4	-155.4	3.00	2.86	-4.37	-44.33	
8,361.7	29.93	316.87	7,366.0	2,801.1	-2,585.4	0.00	0.00	0.00	0.00	
9,359.5	0.00	0.00	8,319.0	2,987.0	-2,759.6	3.00	-3.00	0.00	180.00	8502D-23 L24 496 TC
9,478.1	0.30	239.50	8,437.6	2,986.8	-2,759.9	0.25	0.25	-101.60	239.50	
13,225.5	0.30	239.50	12,185.0	2,977.0	-2,776.6	0.00	0.00	0.00	0.00	8502D-23 L24 496 B+
13,325.5	0.30	239.50	12,285.0	2,976.7	-2,777.0	0.00	0.00	0.00	0.00	
14,325.6	0.30	239.50	13,285.0	2,974.1	-2,781.5	0.00	0.00	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8502D-23 L24 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 8208.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	KBE @ 8208.0ft (Original Well Elev)
<b>Site:</b>	L24 496	<b>North Reference:</b>	True
<b>Well:</b>	8502D-23 L24 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	KOP @ 200' MD
300.0	3.00	355.00	300.0	2.6	-0.2	2.1	3.00	3.00	
366.7	5.00	355.00	366.5	7.2	-0.6	5.7	3.00	3.00	
400.0	5.76	348.02	399.6	10.3	-1.1	8.3	3.00	2.27	
500.0	8.34	335.37	498.9	21.8	-5.2	19.5	3.00	2.58	
600.0	11.14	328.84	597.4	36.7	-13.2	35.8	3.00	2.79	
700.0	14.01	324.93	695.0	54.9	-25.2	57.3	3.00	2.88	
800.0	16.93	322.34	791.4	76.3	-41.0	83.8	3.00	2.92	
900.0	19.88	320.50	886.3	101.0	-60.7	115.3	3.00	2.94	
1,000.0	22.84	319.11	979.4	128.8	-84.2	151.6	3.00	2.96	
1,100.0	25.80	318.03	1,070.5	159.6	-111.5	192.8	3.00	2.97	
1,200.0	28.78	317.16	1,159.4	193.5	-142.4	238.6	3.00	2.97	
1,238.9	29.93	316.87	1,193.3	207.4	-155.4	257.7	3.00	2.97	EOB; Inc=29.93°
1,300.0	29.93	316.87	1,246.2	229.7	-176.3	288.2	0.00	0.00	
1,359.7	29.93	316.87	1,298.0	251.4	-196.7	318.0	0.00	0.00	A_GROOVE
1,400.0	29.93	316.87	1,332.9	266.1	-210.4	338.1	0.00	0.00	
1,500.0	29.93	316.87	1,419.5	302.5	-244.5	388.0	0.00	0.00	
1,600.0	29.93	316.87	1,506.2	338.9	-278.6	437.9	0.00	0.00	
1,700.0	29.93	316.87	1,592.9	375.3	-312.7	487.8	0.00	0.00	
1,800.0	29.93	316.87	1,679.5	411.7	-346.9	537.7	0.00	0.00	
1,900.0	29.93	316.87	1,766.2	448.1	-381.0	587.6	0.00	0.00	
2,000.0	29.93	316.87	1,852.9	484.6	-415.1	637.5	0.00	0.00	
2,100.0	29.93	316.87	1,939.5	521.0	-449.2	687.4	0.00	0.00	
2,200.0	29.93	316.87	2,026.2	557.4	-483.3	737.3	0.00	0.00	
2,300.0	29.93	316.87	2,112.8	593.8	-517.4	787.2	0.00	0.00	
2,400.0	29.93	316.87	2,199.5	630.2	-551.6	837.1	0.00	0.00	
2,500.0	29.93	316.87	2,286.2	666.6	-585.7	887.0	0.00	0.00	
2,600.0	29.93	316.87	2,372.8	703.0	-619.8	936.9	0.00	0.00	
2,700.0	29.93	316.87	2,459.5	739.4	-653.9	986.8	0.00	0.00	
2,781.4	29.93	316.87	2,530.0	769.1	-681.7	1,027.4	0.00	0.00	GARDEN_GULCH / L-1
2,800.0	29.93	316.87	2,546.1	775.9	-688.0	1,036.7	0.00	0.00	
2,900.0	29.93	316.87	2,632.8	812.3	-722.1	1,086.5	0.00	0.00	
3,000.0	29.93	316.87	2,719.5	848.7	-756.2	1,136.4	0.00	0.00	
3,100.0	29.93	316.87	2,806.1	885.1	-790.4	1,186.3	0.00	0.00	
3,200.0	29.93	316.87	2,892.8	921.5	-824.5	1,236.2	0.00	0.00	
3,300.0	29.93	316.87	2,979.4	957.9	-858.6	1,286.1	0.00	0.00	
3,400.0	29.93	316.87	3,066.1	994.3	-892.7	1,336.0	0.00	0.00	
3,500.0	29.93	316.87	3,152.8	1,030.8	-926.8	1,385.9	0.00	0.00	
3,600.0	29.93	316.87	3,239.4	1,067.2	-960.9	1,435.8	0.00	0.00	
3,700.0	29.93	316.87	3,326.1	1,103.6	-995.1	1,485.7	0.00	0.00	
3,800.0	29.93	316.87	3,412.8	1,140.0	-1,029.2	1,535.6	0.00	0.00	
3,900.0	29.93	316.87	3,499.4	1,176.4	-1,063.3	1,585.5	0.00	0.00	
4,000.0	29.93	316.87	3,586.1	1,212.8	-1,097.4	1,635.4	0.00	0.00	
4,100.0	29.93	316.87	3,672.7	1,249.2	-1,131.5	1,685.3	0.00	0.00	
4,200.0	29.93	316.87	3,759.4	1,285.7	-1,165.6	1,735.2	0.00	0.00	
4,300.0	29.93	316.87	3,846.1	1,322.1	-1,199.7	1,785.1	0.00	0.00	
4,400.0	29.93	316.87	3,932.7	1,358.5	-1,233.9	1,835.0	0.00	0.00	
4,500.0	29.93	316.87	4,019.4	1,394.9	-1,268.0	1,884.9	0.00	0.00	
4,600.0	29.93	316.87	4,106.0	1,431.3	-1,302.1	1,934.8	0.00	0.00	
4,700.0	29.93	316.87	4,192.7	1,467.7	-1,336.2	1,984.7	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8502D-23 L24 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 8208.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	KBE @ 8208.0ft (Original Well Elev)
<b>Site:</b>	L24 496	<b>North Reference:</b>	True
<b>Well:</b>	8502D-23 L24 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
4,800.0	29.93	316.87	4,279.4	1,504.1	-1,370.3	2,034.6	0.00	0.00	
4,900.0	29.93	316.87	4,366.0	1,540.5	-1,404.4	2,084.5	0.00	0.00	
5,000.0	29.93	316.87	4,452.7	1,577.0	-1,438.6	2,134.4	0.00	0.00	
5,100.0	29.93	316.87	4,539.4	1,613.4	-1,472.7	2,184.3	0.00	0.00	
5,200.0	29.93	316.87	4,626.0	1,649.8	-1,506.8	2,234.2	0.00	0.00	
5,300.0	29.93	316.87	4,712.7	1,686.2	-1,540.9	2,284.1	0.00	0.00	
5,400.0	29.93	316.87	4,799.3	1,722.6	-1,575.0	2,334.0	0.00	0.00	
5,500.0	29.93	316.87	4,886.0	1,759.0	-1,609.1	2,383.9	0.00	0.00	
5,600.0	29.93	316.87	4,972.7	1,795.4	-1,643.2	2,433.8	0.00	0.00	
5,700.0	29.93	316.87	5,059.3	1,831.9	-1,677.4	2,483.7	0.00	0.00	
5,800.0	29.93	316.87	5,146.0	1,868.3	-1,711.5	2,533.6	0.00	0.00	
5,900.0	29.93	316.87	5,232.6	1,904.7	-1,745.6	2,583.5	0.00	0.00	
6,000.0	29.93	316.87	5,319.3	1,941.1	-1,779.7	2,633.4	0.00	0.00	
6,100.0	29.93	316.87	5,406.0	1,977.5	-1,813.8	2,683.3	0.00	0.00	
6,200.0	29.93	316.87	5,492.6	2,013.9	-1,847.9	2,733.2	0.00	0.00	
6,300.0	29.93	316.87	5,579.3	2,050.3	-1,882.1	2,783.1	0.00	0.00	
6,400.0	29.93	316.87	5,665.9	2,086.8	-1,916.2	2,833.0	0.00	0.00	
6,500.0	29.93	316.87	5,752.6	2,123.2	-1,950.3	2,882.9	0.00	0.00	
6,600.0	29.93	316.87	5,839.3	2,159.6	-1,984.4	2,932.8	0.00	0.00	
6,666.6	29.93	316.87	5,897.0	2,183.8	-2,007.1	2,966.0	0.00	0.00	WASATCH_G
6,700.0	29.93	316.87	5,925.9	2,196.0	-2,018.5	2,982.7	0.00	0.00	
6,800.0	29.93	316.87	6,012.6	2,232.4	-2,052.6	3,032.6	0.00	0.00	
6,900.0	29.93	316.87	6,099.3	2,268.8	-2,086.7	3,082.5	0.00	0.00	
7,000.0	29.93	316.87	6,185.9	2,305.2	-2,120.9	3,132.4	0.00	0.00	
7,100.0	29.93	316.87	6,272.6	2,341.6	-2,155.0	3,182.3	0.00	0.00	
7,200.0	29.93	316.87	6,359.2	2,378.1	-2,189.1	3,232.2	0.00	0.00	
7,300.0	29.93	316.87	6,445.9	2,414.5	-2,223.2	3,282.1	0.00	0.00	
7,400.0	29.93	316.87	6,532.6	2,450.9	-2,257.3	3,332.0	0.00	0.00	
7,500.0	29.93	316.87	6,619.2	2,487.3	-2,291.4	3,381.9	0.00	0.00	
7,600.0	29.93	316.87	6,705.9	2,523.7	-2,325.6	3,431.8	0.00	0.00	
7,700.0	29.93	316.87	6,792.5	2,560.1	-2,359.7	3,481.7	0.00	0.00	
7,800.0	29.93	316.87	6,879.2	2,596.5	-2,393.8	3,531.5	0.00	0.00	
7,900.0	29.93	316.87	6,965.9	2,633.0	-2,427.9	3,581.4	0.00	0.00	
8,000.0	29.93	316.87	7,052.5	2,669.4	-2,462.0	3,631.3	0.00	0.00	
8,100.0	29.93	316.87	7,139.2	2,705.8	-2,496.1	3,681.2	0.00	0.00	
8,200.0	29.93	316.87	7,225.9	2,742.2	-2,530.2	3,731.1	0.00	0.00	
8,300.0	29.93	316.87	7,312.5	2,778.6	-2,564.4	3,781.0	0.00	0.00	
8,361.7	29.93	316.87	7,366.0	2,801.1	-2,585.4	3,811.8	0.00	0.00	Start Drop -3.00
8,400.0	28.78	316.87	7,399.4	2,814.8	-2,598.3	3,830.6	3.00	-3.00	
8,500.0	25.78	316.87	7,488.2	2,848.2	-2,629.6	3,876.4	3.00	-3.00	
8,600.0	22.78	316.87	7,579.4	2,878.2	-2,657.7	3,917.6	3.00	-3.00	
8,700.0	19.78	316.87	7,672.5	2,904.7	-2,682.5	3,953.9	3.00	-3.00	
8,800.0	16.78	316.87	7,767.5	2,927.6	-2,704.0	3,985.2	3.00	-3.00	
8,900.0	13.78	316.87	7,863.9	2,946.9	-2,722.0	4,011.6	3.00	-3.00	
9,000.0	10.78	316.87	7,961.6	2,962.4	-2,736.5	4,032.9	3.00	-3.00	
9,100.0	7.78	316.87	8,060.3	2,974.2	-2,747.6	4,049.0	3.00	-3.00	
9,200.0	4.78	316.87	8,159.7	2,982.1	-2,755.0	4,059.9	3.00	-3.00	
9,300.0	1.78	316.87	8,259.5	2,986.3	-2,759.0	4,065.7	3.00	-3.00	
9,319.5	1.20	316.87	8,279.0	2,986.7	-2,759.3	4,066.2	3.00	-3.00	WILLIAMS_FORK
9,359.5	0.00	0.00	8,319.0	2,987.0	-2,759.6	4,066.6	3.00	-3.00	EOD; Inc=0° - TOG - 8502D-23 L24 496 TOG
9,400.0	0.10	239.50	8,359.5	2,987.0	-2,759.6	4,066.6	0.25	0.25	
9,478.1	0.30	239.50	8,437.6	2,986.8	-2,759.9	4,066.7	0.25	0.25	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8502D-23 L24 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 8208.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	KBE @ 8208.0ft (Original Well Elev)
<b>Site:</b>	L24 496	<b>North Reference:</b>	True
<b>Well:</b>	8502D-23 L24 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
9,500.0	0.30	239.50	8,459.5	2,986.8	-2,760.0	4,066.7	0.00	0.00	
9,600.0	0.30	239.50	8,559.5	2,986.5	-2,760.4	4,066.8	0.00	0.00	
9,700.0	0.30	239.50	8,659.5	2,986.3	-2,760.9	4,066.9	0.00	0.00	
9,800.0	0.30	239.50	8,759.5	2,986.0	-2,761.3	4,067.0	0.00	0.00	
9,900.0	0.30	239.50	8,859.5	2,985.7	-2,761.7	4,067.1	0.00	0.00	
10,000.0	0.30	239.50	8,959.5	2,985.5	-2,762.2	4,067.2	0.00	0.00	
10,100.0	0.30	239.50	9,059.5	2,985.2	-2,762.6	4,067.4	0.00	0.00	
10,200.0	0.30	239.50	9,159.5	2,984.9	-2,763.1	4,067.5	0.00	0.00	
10,300.0	0.30	239.50	9,259.5	2,984.7	-2,763.5	4,067.6	0.00	0.00	
10,400.0	0.30	239.50	9,359.5	2,984.4	-2,764.0	4,067.7	0.00	0.00	
10,500.0	0.30	239.50	9,459.5	2,984.2	-2,764.4	4,067.8	0.00	0.00	
10,600.0	0.30	239.50	9,559.5	2,983.9	-2,764.9	4,067.9	0.00	0.00	
10,700.0	0.30	239.50	9,659.5	2,983.6	-2,765.3	4,068.0	0.00	0.00	
10,800.0	0.30	239.50	9,759.5	2,983.4	-2,765.8	4,068.1	0.00	0.00	
10,900.0	0.30	239.50	9,859.5	2,983.1	-2,766.2	4,068.3	0.00	0.00	
11,000.0	0.30	239.50	9,959.5	2,982.8	-2,766.7	4,068.4	0.00	0.00	
11,100.0	0.30	239.50	10,059.5	2,982.6	-2,767.1	4,068.5	0.00	0.00	
11,200.0	0.30	239.50	10,159.5	2,982.3	-2,767.5	4,068.6	0.00	0.00	
11,300.0	0.30	239.50	10,259.5	2,982.1	-2,768.0	4,068.7	0.00	0.00	
11,400.0	0.30	239.50	10,359.5	2,981.8	-2,768.4	4,068.8	0.00	0.00	
11,500.0	0.30	239.50	10,459.5	2,981.5	-2,768.9	4,068.9	0.00	0.00	
11,600.0	0.30	239.50	10,559.5	2,981.3	-2,769.3	4,069.0	0.00	0.00	
11,700.0	0.30	239.50	10,659.5	2,981.0	-2,769.8	4,069.2	0.00	0.00	
11,800.0	0.30	239.50	10,759.5	2,980.7	-2,770.2	4,069.3	0.00	0.00	
11,900.0	0.30	239.50	10,859.5	2,980.5	-2,770.7	4,069.4	0.00	0.00	
12,000.0	0.30	239.50	10,959.5	2,980.2	-2,771.1	4,069.5	0.00	0.00	
12,100.0	0.30	239.50	11,059.5	2,980.0	-2,771.6	4,069.6	0.00	0.00	
12,200.0	0.30	239.50	11,159.5	2,979.7	-2,772.0	4,069.7	0.00	0.00	
12,300.0	0.30	239.50	11,259.5	2,979.4	-2,772.4	4,069.8	0.00	0.00	
12,400.0	0.30	239.50	11,359.5	2,979.2	-2,772.9	4,069.9	0.00	0.00	
12,500.0	0.30	239.50	11,459.5	2,978.9	-2,773.3	4,070.0	0.00	0.00	
12,600.0	0.30	239.50	11,559.5	2,978.6	-2,773.8	4,070.2	0.00	0.00	
12,700.0	0.30	239.50	11,659.5	2,978.4	-2,774.2	4,070.3	0.00	0.00	
12,800.0	0.30	239.50	11,759.5	2,978.1	-2,774.7	4,070.4	0.00	0.00	
12,900.0	0.30	239.50	11,859.5	2,977.9	-2,775.1	4,070.5	0.00	0.00	
13,000.0	0.30	239.50	11,959.5	2,977.6	-2,775.6	4,070.6	0.00	0.00	
13,100.0	0.30	239.50	12,059.5	2,977.3	-2,776.0	4,070.7	0.00	0.00	
13,200.0	0.30	239.50	12,159.5	2,977.1	-2,776.5	4,070.8	0.00	0.00	
13,225.5	0.30	239.50	12,185.0	2,977.0	-2,776.6	4,070.9	0.00	0.00	ROLLINS - 8502D-23 L24 496 BHL
13,300.0	0.30	239.50	12,259.5	2,976.8	-2,776.9	4,070.9	0.00	0.00	
13,325.5	0.30	239.50	12,285.0	2,976.7	-2,777.0	4,071.0	0.00	0.00	Drillers TD @ 13325.5' MD
13,370.5	0.30	239.50	12,330.0	2,976.6	-2,777.2	4,071.0	0.00	0.00	COZZETTE
13,400.0	0.30	239.50	12,359.5	2,976.5	-2,777.4	4,071.1	0.00	0.00	
13,500.0	0.30	239.50	12,459.5	2,976.3	-2,777.8	4,071.2	0.00	0.00	
13,600.0	0.30	239.50	12,559.5	2,976.0	-2,778.2	4,071.3	0.00	0.00	
13,669.5	0.30	239.50	12,629.0	2,975.8	-2,778.6	4,071.4	0.00	0.00	CORCORAN
13,700.0	0.30	239.50	12,659.5	2,975.8	-2,778.7	4,071.4	0.00	0.00	
13,773.5	0.30	239.50	12,733.0	2,975.6	-2,779.0	4,071.5	0.00	0.00	LOWER_SEGO
13,800.0	0.30	239.50	12,759.5	2,975.5	-2,779.1	4,071.5	0.00	0.00	
13,880.6	0.30	239.50	12,840.0	2,975.3	-2,779.5	4,071.6	0.00	0.00	SEGO
13,900.0	0.30	239.50	12,859.4	2,975.2	-2,779.6	4,071.6	0.00	0.00	
14,000.0	0.30	239.50	12,959.4	2,975.0	-2,780.0	4,071.7	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8502D-23 L24 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 8208.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	KBE @ 8208.0ft (Original Well Elev)
<b>Site:</b>	L24 496	<b>North Reference:</b>	True
<b>Well:</b>	8502D-23 L24 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
14,100.0	0.30	239.50	13,059.4	2,974.7	-2,780.5	4,071.8	0.00	0.00	
14,200.0	0.30	239.50	13,159.4	2,974.4	-2,780.9	4,072.0	0.00	0.00	
14,300.0	0.30	239.50	13,259.4	2,974.2	-2,781.4	4,072.1	0.00	0.00	
14,325.6	0.30	239.50	13,285.0	2,974.1	-2,781.5	4,072.1	0.00	0.00	

### 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
8502D-23 L24 496 BHL - plan hits target center - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	12,185.0	2,977.0	-2,776.6	1,688,198.71	2,259,175.05	39° 41' 36.33 N	108° 7' 58.59 W
8502D-23 L24 496 TOG - plan hits target center - Point	0.00	0.00	8,319.0	2,987.0	-2,759.6	1,688,208.22	2,259,192.31	39° 41' 36.43 N	108° 7' 58.37 W

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,359.7	1,298.0	A_GROOVE			
2,781.4	2,530.0	GARDEN_GULCH / L-1			
6,666.6	5,897.0	WASATCH_G			
9,319.5	8,279.0	WILLIAMS_FORK			
9,359.5	8,319.0	TOG			
13,225.5	12,185.0	ROLLINS			
13,370.5	12,330.0	COZZETTE			
13,669.5	12,629.0	CORCORAN			
13,773.5	12,733.0	LOWER_SEGO			
13,880.6	12,840.0	SEGO			

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
200.0	200.0	0.0	0.0	KOP @ 200' MD
1,238.9	1,193.2	7.2	-0.6	EOB; Inc=29.93°
8,361.7	7,366.0	207.4	-155.4	Start Drop -3.00
9,359.5	8,319.0	2,801.1	-2,585.4	EOD; Inc=0°
13,325.5	12,285.0	2,987.0	-2,759.6	Drillers TD @ 13325.5' MD
14,325.6	13,285.0	2,986.8	-2,759.9	Permit TD @ 14325.6' MD