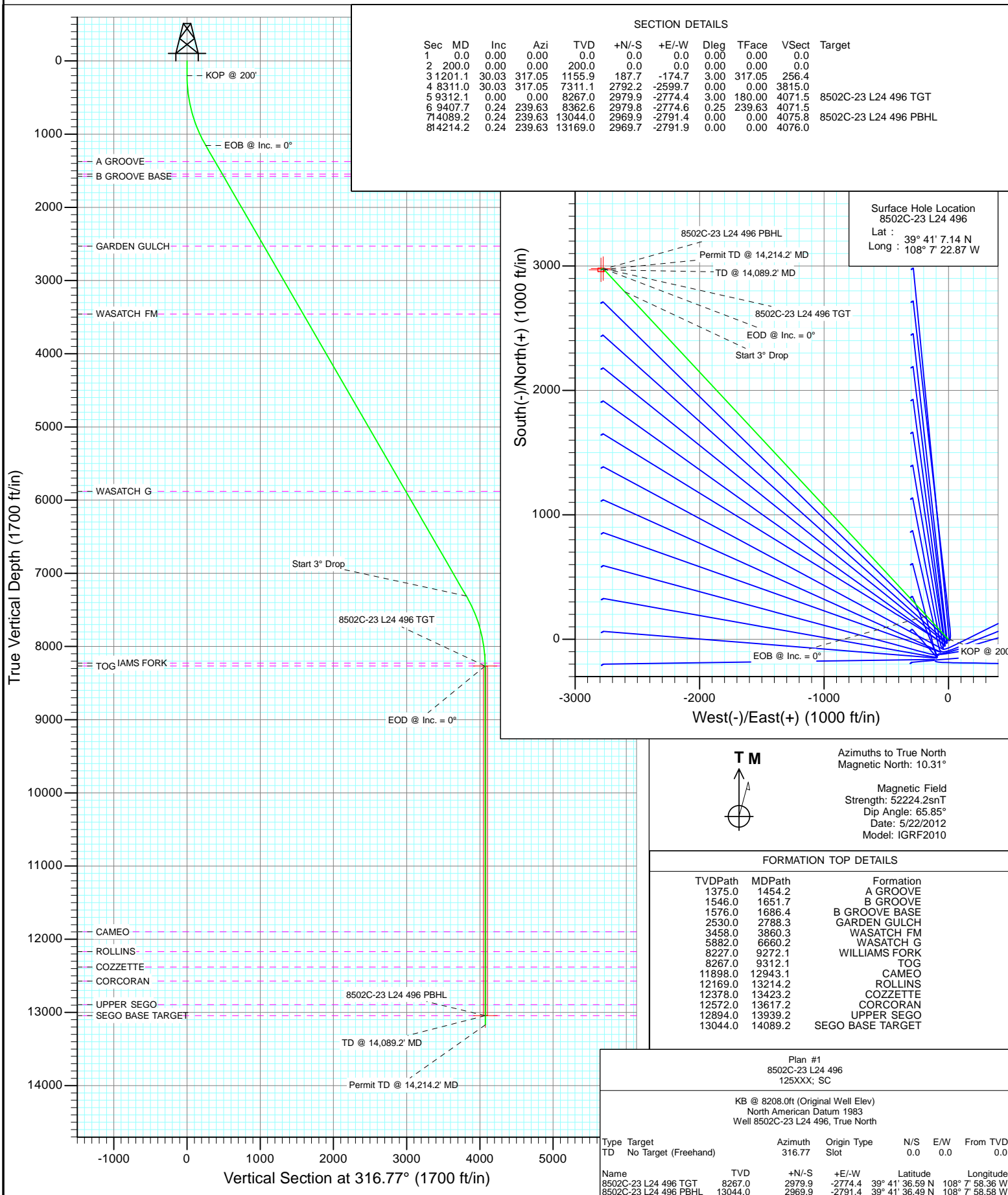
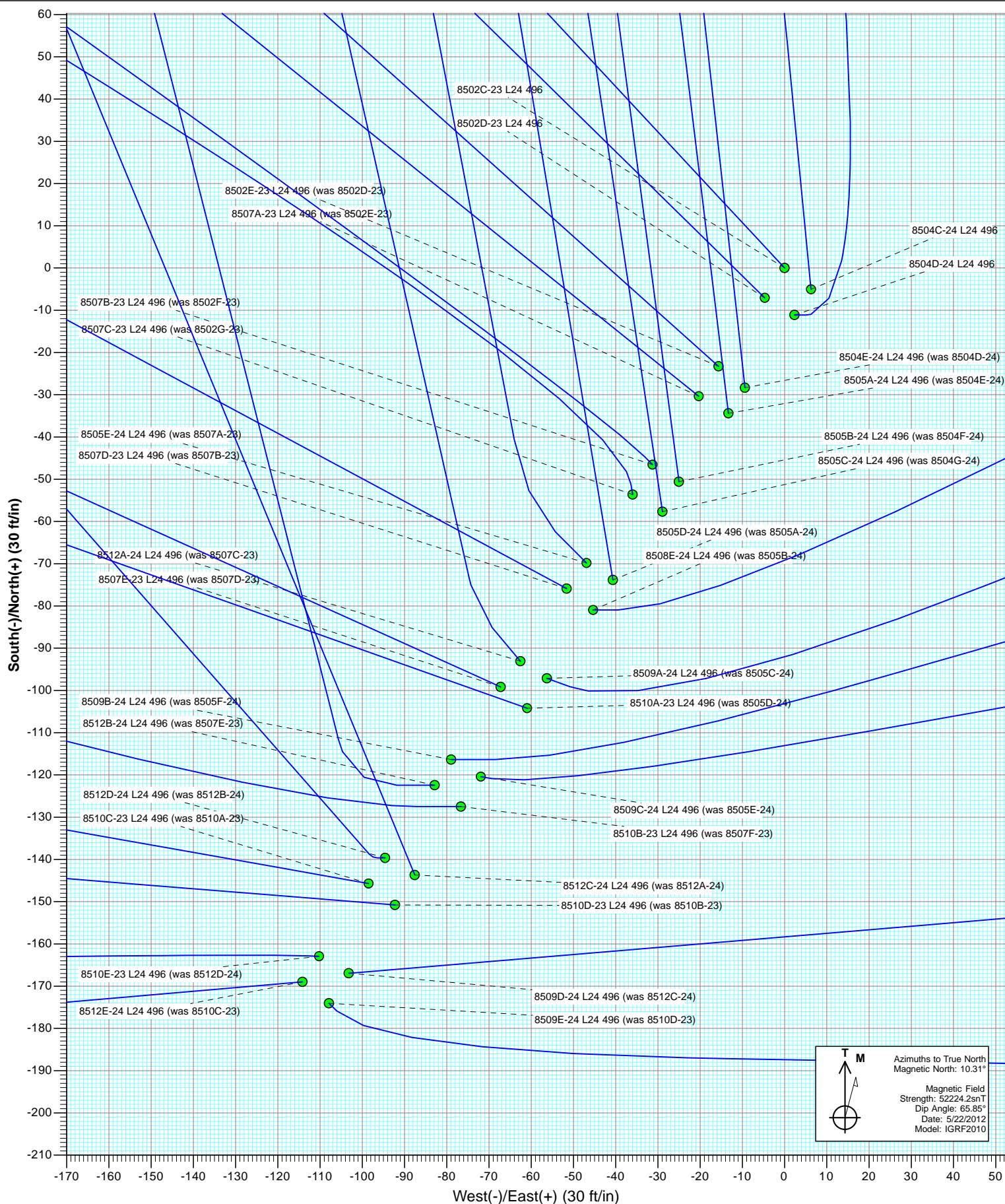
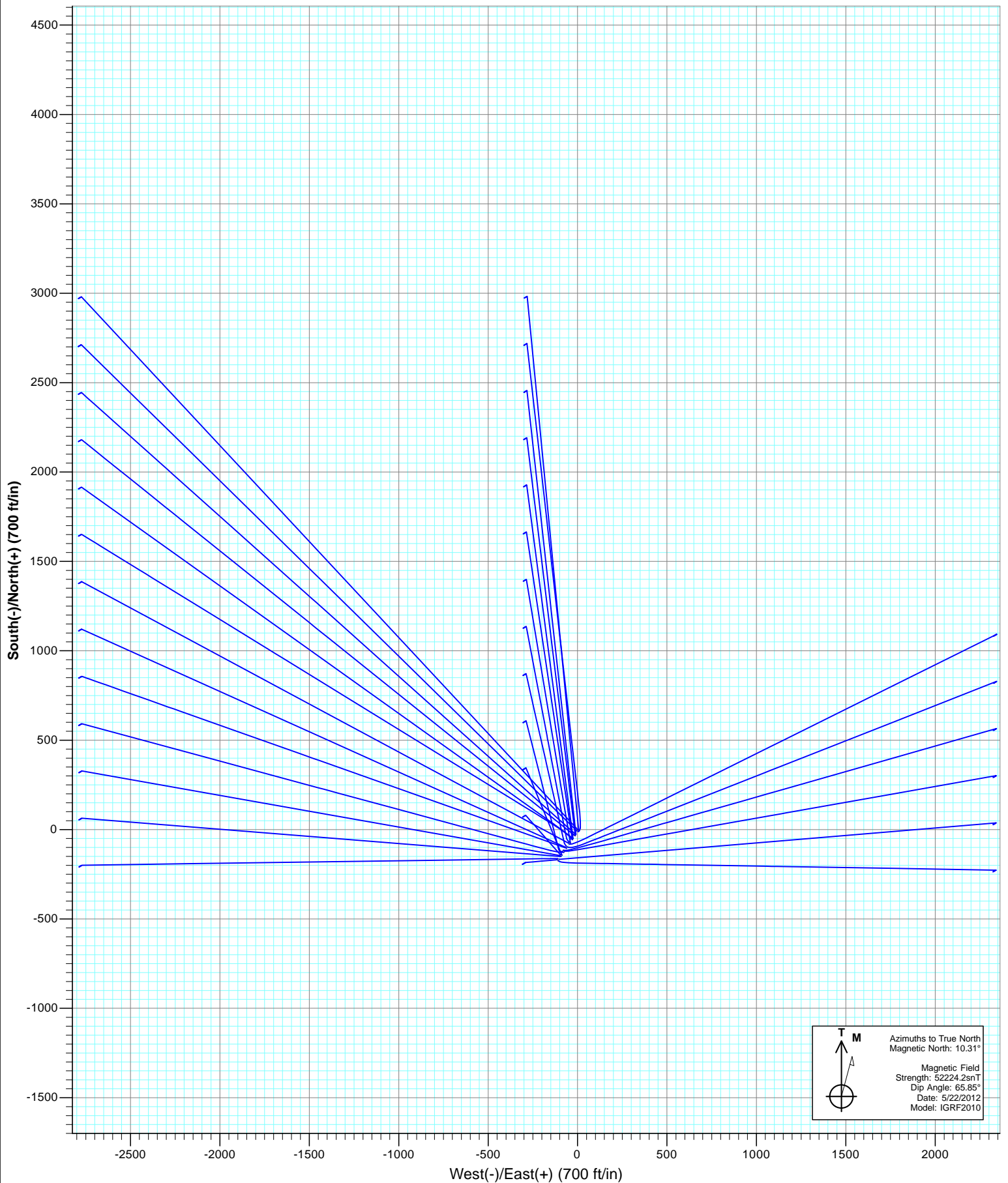




Project: Story Gulch  
Site: L24 496  
Well: 8502C-23 L24 496  
Wellbore: DD  
Design: Plan #1







# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8502C-23 L24 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB @ 8208.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	KB @ 8208.0ft (Original Well Elev)
<b>Site:</b>	L24 496	<b>North Reference:</b>	True
<b>Well:</b>	8502C-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>	8502C-23 L24 496			
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,685,165.59 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,261,880.82 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	5/22/2012	10.31	65.85	52,224

<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	316.77

<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	
1,201.1	30.03	317.05	1,155.9	187.7	-174.7	3.00	3.00	0.00	317.05	
8,311.0	30.03	317.05	7,311.1	2,792.2	-2,599.7	0.00	0.00	0.00	0.00	
9,312.1	0.00	0.00	8,267.0	2,979.9	-2,774.4	3.00	-3.00	0.00	180.00	8502C-23 L24 496 TC
9,407.7	0.24	239.63	8,362.6	2,979.8	-2,774.6	0.25	0.25	-125.89	239.63	
14,089.2	0.24	239.63	13,044.0	2,969.9	-2,791.4	0.00	0.00	0.00	0.00	8502C-23 L24 496 PE
14,214.2	0.24	239.63	13,169.0	2,969.7	-2,791.9	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 8502C-23 L24 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB @ 8208.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	KB @ 8208.0ft (Original Well Elev)
<b>Site:</b>	L24 496	<b>North Reference:</b>	True
<b>Well:</b>	8502C-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'
300.0	3.00	317.05	300.0	1.9	-1.8	2.6	3.00	3.00	
400.0	6.00	317.05	399.6	7.7	-7.1	10.5	3.00	3.00	
500.0	9.00	317.05	498.8	17.2	-16.0	23.5	3.00	3.00	
600.0	12.00	317.05	597.1	30.5	-28.4	41.7	3.00	3.00	
700.0	15.00	317.05	694.3	47.6	-44.3	65.1	3.00	3.00	
800.0	18.00	317.05	790.2	68.4	-63.7	93.5	3.00	3.00	
900.0	21.00	317.05	884.4	92.8	-86.4	126.9	3.00	3.00	
1,000.0	24.00	317.05	976.8	120.8	-112.5	165.1	3.00	3.00	
1,100.0	27.00	317.05	1,067.1	152.4	-141.8	208.2	3.00	3.00	
1,201.1	30.03	317.05	1,155.9	187.7	-174.7	256.4	3.00	3.00	EOB @ Inc. = 0°
1,300.0	30.03	317.05	1,241.5	223.9	-208.5	305.9	0.00	0.00	
1,400.0	30.03	317.05	1,328.1	260.5	-242.6	356.0	0.00	0.00	
1,454.2	30.03	317.05	1,375.0	280.4	-261.1	383.1	0.00	0.00	A GROOVE
1,500.0	30.03	317.05	1,414.6	297.2	-276.7	406.0	0.00	0.00	
1,600.0	30.03	317.05	1,501.2	333.8	-310.8	456.1	0.00	0.00	
1,651.7	30.03	317.05	1,546.0	352.8	-328.4	482.0	0.00	0.00	B GROOVE
1,686.4	30.03	317.05	1,576.0	365.4	-340.2	499.3	0.00	0.00	B GROOVE BASE
1,700.0	30.03	317.05	1,587.8	370.4	-344.9	506.1	0.00	0.00	
1,800.0	30.03	317.05	1,674.4	407.1	-379.0	556.2	0.00	0.00	
1,900.0	30.03	317.05	1,760.9	443.7	-413.1	606.2	0.00	0.00	
2,000.0	30.03	317.05	1,847.5	480.3	-447.2	656.3	0.00	0.00	
2,100.0	30.03	317.05	1,934.1	517.0	-481.3	706.3	0.00	0.00	
2,200.0	30.03	317.05	2,020.7	553.6	-515.4	756.4	0.00	0.00	
2,300.0	30.03	317.05	2,107.2	590.2	-549.5	806.4	0.00	0.00	
2,400.0	30.03	317.05	2,193.8	626.9	-583.6	856.5	0.00	0.00	
2,500.0	30.03	317.05	2,280.4	663.5	-617.7	906.5	0.00	0.00	
2,600.0	30.03	317.05	2,366.9	700.1	-651.8	956.6	0.00	0.00	
2,700.0	30.03	317.05	2,453.5	736.8	-686.0	1,006.6	0.00	0.00	
2,788.3	30.03	317.05	2,530.0	769.1	-716.1	1,050.9	0.00	0.00	GARDEN GULCH
2,800.0	30.03	317.05	2,540.1	773.4	-720.1	1,056.7	0.00	0.00	
2,900.0	30.03	317.05	2,626.7	810.0	-754.2	1,106.7	0.00	0.00	
3,000.0	30.03	317.05	2,713.2	846.7	-788.3	1,156.8	0.00	0.00	
3,100.0	30.03	317.05	2,799.8	883.3	-822.4	1,206.8	0.00	0.00	
3,200.0	30.03	317.05	2,886.4	919.9	-856.5	1,256.9	0.00	0.00	
3,300.0	30.03	317.05	2,973.0	956.6	-890.6	1,306.9	0.00	0.00	
3,400.0	30.03	317.05	3,059.5	993.2	-924.7	1,357.0	0.00	0.00	
3,500.0	30.03	317.05	3,146.1	1,029.8	-958.8	1,407.1	0.00	0.00	
3,600.0	30.03	317.05	3,232.7	1,066.5	-992.9	1,457.1	0.00	0.00	
3,700.0	30.03	317.05	3,319.2	1,103.1	-1,027.0	1,507.2	0.00	0.00	
3,800.0	30.03	317.05	3,405.8	1,139.7	-1,061.1	1,557.2	0.00	0.00	
3,860.3	30.03	317.05	3,458.0	1,161.8	-1,081.7	1,587.4	0.00	0.00	WASATCH FM
3,900.0	30.03	317.05	3,492.4	1,176.4	-1,095.2	1,607.3	0.00	0.00	
4,000.0	30.03	317.05	3,579.0	1,213.0	-1,129.3	1,657.3	0.00	0.00	
4,100.0	30.03	317.05	3,665.5	1,249.6	-1,163.4	1,707.4	0.00	0.00	
4,200.0	30.03	317.05	3,752.1	1,286.3	-1,197.5	1,757.4	0.00	0.00	
4,300.0	30.03	317.05	3,838.7	1,322.9	-1,231.7	1,807.5	0.00	0.00	
4,400.0	30.03	317.05	3,925.3	1,359.5	-1,265.8	1,857.5	0.00	0.00	
4,500.0	30.03	317.05	4,011.8	1,396.2	-1,299.9	1,907.6	0.00	0.00	
4,600.0	30.03	317.05	4,098.4	1,432.8	-1,334.0	1,957.6	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 8502C-23 L24 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB @ 8208.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	KB @ 8208.0ft (Original Well Elev)
<b>Site:</b>	L24 496	<b>North Reference:</b>	True
<b>Well:</b>	8502C-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
4,700.0	30.03	317.05	4,185.0	1,469.4	-1,368.1	2,007.7	0.00	0.00	
4,800.0	30.03	317.05	4,271.5	1,506.0	-1,402.2	2,057.7	0.00	0.00	
4,900.0	30.03	317.05	4,358.1	1,542.7	-1,436.3	2,107.8	0.00	0.00	
5,000.0	30.03	317.05	4,444.7	1,579.3	-1,470.4	2,157.8	0.00	0.00	
5,100.0	30.03	317.05	4,531.3	1,615.9	-1,504.5	2,207.9	0.00	0.00	
5,200.0	30.03	317.05	4,617.8	1,652.6	-1,538.6	2,257.9	0.00	0.00	
5,300.0	30.03	317.05	4,704.4	1,689.2	-1,572.7	2,308.0	0.00	0.00	
5,400.0	30.03	317.05	4,791.0	1,725.8	-1,606.8	2,358.0	0.00	0.00	
5,500.0	30.03	317.05	4,877.5	1,762.5	-1,640.9	2,408.1	0.00	0.00	
5,600.0	30.03	317.05	4,964.1	1,799.1	-1,675.0	2,458.1	0.00	0.00	
5,700.0	30.03	317.05	5,050.7	1,835.7	-1,709.1	2,508.2	0.00	0.00	
5,800.0	30.03	317.05	5,137.3	1,872.4	-1,743.3	2,558.2	0.00	0.00	
5,900.0	30.03	317.05	5,223.8	1,909.0	-1,777.4	2,608.3	0.00	0.00	
6,000.0	30.03	317.05	5,310.4	1,945.6	-1,811.5	2,658.3	0.00	0.00	
6,100.0	30.03	317.05	5,397.0	1,982.3	-1,845.6	2,708.4	0.00	0.00	
6,200.0	30.03	317.05	5,483.6	2,018.9	-1,879.7	2,758.4	0.00	0.00	
6,300.0	30.03	317.05	5,570.1	2,055.5	-1,913.8	2,808.5	0.00	0.00	
6,400.0	30.03	317.05	5,656.7	2,092.2	-1,947.9	2,858.5	0.00	0.00	
6,500.0	30.03	317.05	5,743.3	2,128.8	-1,982.0	2,908.6	0.00	0.00	
6,600.0	30.03	317.05	5,829.8	2,165.4	-2,016.1	2,958.6	0.00	0.00	
6,660.2	30.03	317.05	5,882.0	2,187.5	-2,036.6	2,988.8	0.00	0.00	WASATCH G
6,700.0	30.03	317.05	5,916.4	2,202.1	-2,050.2	3,008.7	0.00	0.00	
6,800.0	30.03	317.05	6,003.0	2,238.7	-2,084.3	3,058.7	0.00	0.00	
6,900.0	30.03	317.05	6,089.6	2,275.3	-2,118.4	3,108.8	0.00	0.00	
7,000.0	30.03	317.05	6,176.1	2,312.0	-2,152.5	3,158.9	0.00	0.00	
7,100.0	30.03	317.05	6,262.7	2,348.6	-2,186.6	3,208.9	0.00	0.00	
7,200.0	30.03	317.05	6,349.3	2,385.2	-2,220.7	3,259.0	0.00	0.00	
7,300.0	30.03	317.05	6,435.9	2,421.9	-2,254.8	3,309.0	0.00	0.00	
7,400.0	30.03	317.05	6,522.4	2,458.5	-2,289.0	3,359.1	0.00	0.00	
7,500.0	30.03	317.05	6,609.0	2,495.1	-2,323.1	3,409.1	0.00	0.00	
7,600.0	30.03	317.05	6,695.6	2,531.8	-2,357.2	3,459.2	0.00	0.00	
7,700.0	30.03	317.05	6,782.1	2,568.4	-2,391.3	3,509.2	0.00	0.00	
7,800.0	30.03	317.05	6,868.7	2,605.0	-2,425.4	3,559.3	0.00	0.00	
7,900.0	30.03	317.05	6,955.3	2,641.7	-2,459.5	3,609.3	0.00	0.00	
8,000.0	30.03	317.05	7,041.9	2,678.3	-2,493.6	3,659.4	0.00	0.00	
8,100.0	30.03	317.05	7,128.4	2,714.9	-2,527.7	3,709.4	0.00	0.00	
8,200.0	30.03	317.05	7,215.0	2,751.6	-2,561.8	3,759.5	0.00	0.00	
8,300.0	30.03	317.05	7,301.6	2,788.2	-2,595.9	3,809.5	0.00	0.00	
8,311.0	30.03	317.05	7,311.1	2,792.2	-2,599.7	3,815.0	0.00	0.00	Start 3° Drop
8,400.0	27.36	317.05	7,389.2	2,823.5	-2,628.8	3,857.8	3.00	-3.00	
8,500.0	24.36	317.05	7,479.1	2,855.4	-2,658.5	3,901.4	3.00	-3.00	
8,600.0	21.36	317.05	7,571.3	2,883.9	-2,685.0	3,940.2	3.00	-3.00	
8,700.0	18.36	317.05	7,665.3	2,908.7	-2,708.1	3,974.2	3.00	-3.00	
8,800.0	15.36	317.05	7,761.0	2,930.0	-2,727.9	4,003.2	3.00	-3.00	
8,900.0	12.36	317.05	7,858.1	2,947.5	-2,744.2	4,027.2	3.00	-3.00	
9,000.0	9.36	317.05	7,956.3	2,961.3	-2,757.1	4,046.0	3.00	-3.00	
9,100.0	6.36	317.05	8,055.3	2,971.3	-2,766.4	4,059.7	3.00	-3.00	
9,200.0	3.36	317.05	8,154.9	2,977.5	-2,772.2	4,068.2	3.00	-3.00	
9,272.1	1.20	317.05	8,227.0	2,979.6	-2,774.1	4,071.0	3.00	-3.00	WILLIAMS FORK
9,300.0	0.36	317.05	8,254.9	2,979.9	-2,774.4	4,071.4	3.00	-3.00	
9,312.1	0.00	0.00	8,267.0	2,979.9	-2,774.4	4,071.5	3.00	-3.00	EOD @ Inc. = 0° - TOG
9,407.7	0.24	239.63	8,362.6	2,979.8	-2,774.6	4,071.5	0.25	0.25	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8502C-23 L24 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB @ 8208.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	KB @ 8208.0ft (Original Well Elev)
<b>Site:</b>	L24 496	<b>North Reference:</b>	True
<b>Well:</b>	8502C-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	0.24	239.63	8,454.9	2,979.6	-2,774.9	4,071.6	0.00	0.00	
9,600.0	0.24	239.63	8,554.9	2,979.4	-2,775.3	4,071.7	0.00	0.00	
9,700.0	0.24	239.63	8,654.9	2,979.2	-2,775.6	4,071.8	0.00	0.00	
9,800.0	0.24	239.63	8,754.9	2,979.0	-2,776.0	4,071.9	0.00	0.00	
9,900.0	0.24	239.63	8,854.9	2,978.8	-2,776.3	4,072.0	0.00	0.00	
10,000.0	0.24	239.63	8,954.9	2,978.6	-2,776.7	4,072.0	0.00	0.00	
10,100.0	0.24	239.63	9,054.9	2,978.3	-2,777.1	4,072.1	0.00	0.00	
10,200.0	0.24	239.63	9,154.9	2,978.1	-2,777.4	4,072.2	0.00	0.00	
10,300.0	0.24	239.63	9,254.9	2,977.9	-2,777.8	4,072.3	0.00	0.00	
10,400.0	0.24	239.63	9,354.9	2,977.7	-2,778.1	4,072.4	0.00	0.00	
10,500.0	0.24	239.63	9,454.9	2,977.5	-2,778.5	4,072.5	0.00	0.00	
10,600.0	0.24	239.63	9,554.9	2,977.3	-2,778.9	4,072.6	0.00	0.00	
10,700.0	0.24	239.63	9,654.9	2,977.1	-2,779.2	4,072.7	0.00	0.00	
10,800.0	0.24	239.63	9,754.9	2,976.9	-2,779.6	4,072.8	0.00	0.00	
10,900.0	0.24	239.63	9,854.9	2,976.7	-2,779.9	4,072.9	0.00	0.00	
11,000.0	0.24	239.63	9,954.9	2,976.4	-2,780.3	4,073.0	0.00	0.00	
11,100.0	0.24	239.63	10,054.9	2,976.2	-2,780.7	4,073.1	0.00	0.00	
11,200.0	0.24	239.63	10,154.9	2,976.0	-2,781.0	4,073.2	0.00	0.00	
11,300.0	0.24	239.63	10,254.9	2,975.8	-2,781.4	4,073.3	0.00	0.00	
11,400.0	0.24	239.63	10,354.9	2,975.6	-2,781.7	4,073.3	0.00	0.00	
11,500.0	0.24	239.63	10,454.9	2,975.4	-2,782.1	4,073.4	0.00	0.00	
11,600.0	0.24	239.63	10,554.9	2,975.2	-2,782.5	4,073.5	0.00	0.00	
11,700.0	0.24	239.63	10,654.9	2,975.0	-2,782.8	4,073.6	0.00	0.00	
11,800.0	0.24	239.63	10,754.9	2,974.8	-2,783.2	4,073.7	0.00	0.00	
11,900.0	0.24	239.63	10,854.9	2,974.5	-2,783.5	4,073.8	0.00	0.00	
12,000.0	0.24	239.63	10,954.9	2,974.3	-2,783.9	4,073.9	0.00	0.00	
12,100.0	0.24	239.63	11,054.9	2,974.1	-2,784.3	4,074.0	0.00	0.00	
12,200.0	0.24	239.63	11,154.9	2,973.9	-2,784.6	4,074.1	0.00	0.00	
12,300.0	0.24	239.63	11,254.9	2,973.7	-2,785.0	4,074.2	0.00	0.00	
12,400.0	0.24	239.63	11,354.9	2,973.5	-2,785.3	4,074.3	0.00	0.00	
12,500.0	0.24	239.63	11,454.9	2,973.3	-2,785.7	4,074.4	0.00	0.00	
12,600.0	0.24	239.63	11,554.9	2,973.1	-2,786.1	4,074.5	0.00	0.00	
12,700.0	0.24	239.63	11,654.9	2,972.9	-2,786.4	4,074.6	0.00	0.00	
12,800.0	0.24	239.63	11,754.9	2,972.6	-2,786.8	4,074.6	0.00	0.00	
12,900.0	0.24	239.63	11,854.8	2,972.4	-2,787.1	4,074.7	0.00	0.00	
12,943.2	0.24	239.63	11,898.0	2,972.3	-2,787.3	4,074.8	0.00	0.00	CAMEO
13,000.0	0.24	239.63	11,954.8	2,972.2	-2,787.5	4,074.8	0.00	0.00	
13,100.0	0.24	239.63	12,054.8	2,972.0	-2,787.9	4,074.9	0.00	0.00	
13,200.0	0.24	239.63	12,154.8	2,971.8	-2,788.2	4,075.0	0.00	0.00	
13,214.2	0.24	239.63	12,169.0	2,971.8	-2,788.3	4,075.0	0.00	0.00	ROLLINS
13,300.0	0.24	239.63	12,254.8	2,971.6	-2,788.6	4,075.1	0.00	0.00	
13,400.0	0.24	239.63	12,354.8	2,971.4	-2,788.9	4,075.2	0.00	0.00	
13,423.2	0.24	239.63	12,378.0	2,971.3	-2,789.0	4,075.2	0.00	0.00	COZZETTE
13,500.0	0.24	239.63	12,454.8	2,971.2	-2,789.3	4,075.3	0.00	0.00	
13,600.0	0.24	239.63	12,554.8	2,971.0	-2,789.7	4,075.4	0.00	0.00	
13,617.2	0.24	239.63	12,572.0	2,970.9	-2,789.7	4,075.4	0.00	0.00	CORCORAN
13,700.0	0.24	239.63	12,654.8	2,970.8	-2,790.0	4,075.5	0.00	0.00	
13,800.0	0.24	239.63	12,754.8	2,970.5	-2,790.4	4,075.6	0.00	0.00	
13,900.0	0.24	239.63	12,854.8	2,970.3	-2,790.7	4,075.7	0.00	0.00	
13,939.2	0.24	239.63	12,894.0	2,970.2	-2,790.9	4,075.7	0.00	0.00	UPPER SEGO
14,000.0	0.24	239.63	12,954.8	2,970.1	-2,791.1	4,075.8	0.00	0.00	
14,089.2	0.24	239.63	13,044.0	2,969.9	-2,791.4	4,075.8	0.00	0.00	TD @ 14,089.2' MD - SEGO BASE TARGET



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8502C-23 L24 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB @ 8208.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	KB @ 8208.0ft (Original Well Elev)
<b>Site:</b>	L24 496	<b>North Reference:</b>	True
<b>Well:</b>	8502C-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	0.24	239.63	13,054.8	2,969.9	-2,791.5	4,075.9	0.00	0.00	
14,200.0	0.24	239.63	13,154.8	2,969.7	-2,791.8	4,076.0	0.00	0.00	
14,214.2	0.24	239.63	13,169.0	2,969.7	-2,791.9	4,076.0	0.00	0.00	Permit TD @ 14,214.2' 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
8502C-23 L24 496 TGT - plan hits target center - Point	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
8502C-23 L24 496 PBHI - plan hits target center - Rectangle (sides W30.0 H50.0 D0.0)	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

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,454.2	1,375.0	A GROOVE				
1,651.7	1,546.0	B GROOVE				
1,686.4	1,576.0	B GROOVE BASE				
2,788.3	2,530.0	GARDEN GULCH				
3,860.3	3,458.0	WASATCH FM				
6,660.2	5,882.0	WASATCH G				
9,272.1	8,227.0	WILLIAMS FORK				
9,312.1	8,267.0	TOG				
12,943.1	11,898.0	CAMEO				
13,214.2	12,169.0	ROLLINS				
13,423.2	12,378.0	COZZETTE				
13,617.2	12,572.0	CORCORAN				
13,939.2	12,894.0	UPPER SEGO				
14,089.2	13,044.0	SEGO BASE TARGET				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
1,201.1	1,155.9	187.7	-174.7	EOB @ Inc. = 0°
8,311.0	7,311.1	2,792.2	-2,599.7	Start 3° Drop
9,312.1	8,267.0	2,979.9	-2,774.4	EOD @ Inc. = 0°
14,089.2	13,044.0	2,969.9	-2,791.4	TD @ 14,089.2' MD
14,214.2	13,169.0	2,969.7	-2,791.9	Permit TD @ 14,214.2' MD