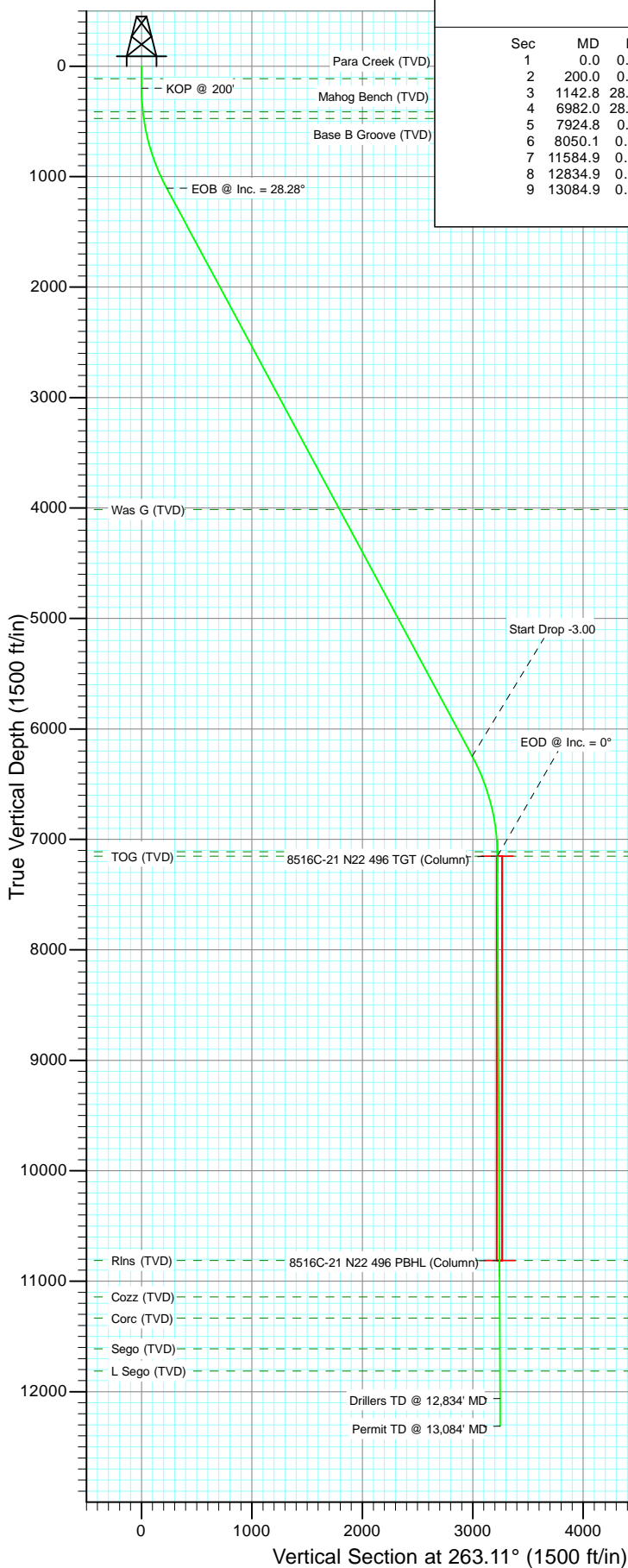
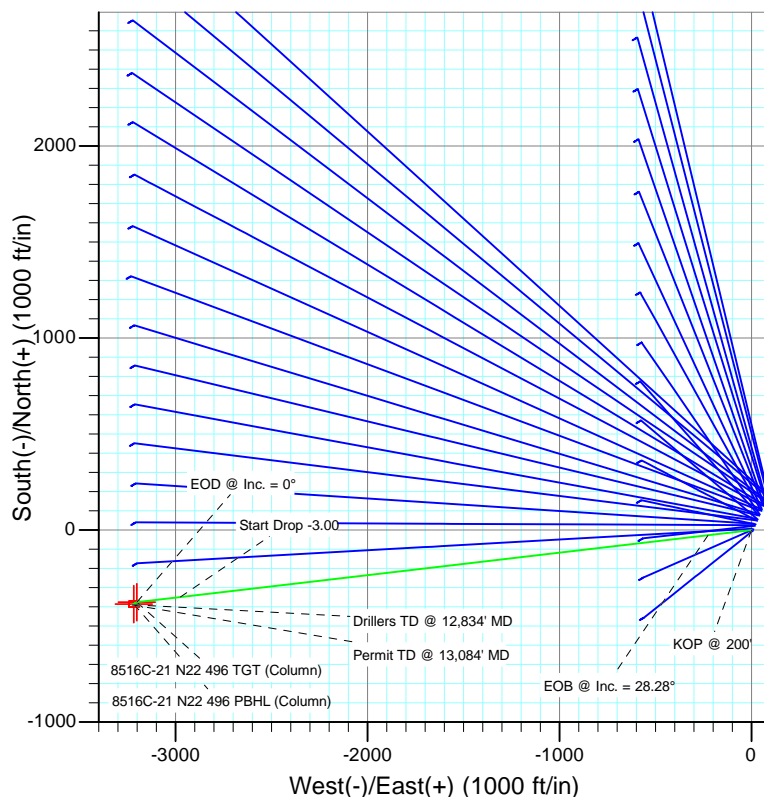




Project: Story Gulch  
Site: S22-T4S-R96W (N22 496) (Column Pattern)  
Well: 8516C-21 N22 496  
Wellbore: DD  
Design: Plan #1



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	1142.8	28.28	263.31	1105.0	-26.6	-226.5	3.00	263.31	228.0	
4	6982.0	28.28	263.31	6247.0	-348.9	-2974.5	0.00	0.00	2994.9	
5	7924.8	0.00	0.00	7152.0	-375.5	-3201.0	3.00	180.00	3222.9	8516C-21 N22 496 TGT (Column)
6	8050.1	0.31	239.58	7277.3	-375.7	-3201.3	0.25	239.58	3223.2	
7	11584.9	0.31	239.58	10812.0	-385.5	-3218.0	0.00	0.00	3241.0	8516C-21 N22 496 PBHL (Column)
8	12834.9	0.31	239.58	12062.0	-388.9	-3223.9	0.00	0.00	3247.2	
9	13084.9	0.31	239.58	12312.0	-389.6	-3225.0	0.00	0.00	3248.5	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
112.0	112.0	Para Creek (TVD)
412.0	412.4	Mahog Bench (TVD)
472.0	472.9	Base B Groove (TVD)
4012.0	4444.0	Was G (TVD)
7112.0	7884.8	WF (TVD)
7152.0	7924.8	TOG (TVD)
10812.0	11584.9	Rlns (TVD)
11142.0	11914.9	Cozz (TVD)
11332.0	12104.9	Corc (TVD)
11612.0	12384.9	Sego (TVD)
11812.0	12584.9	L Sego (TVD)



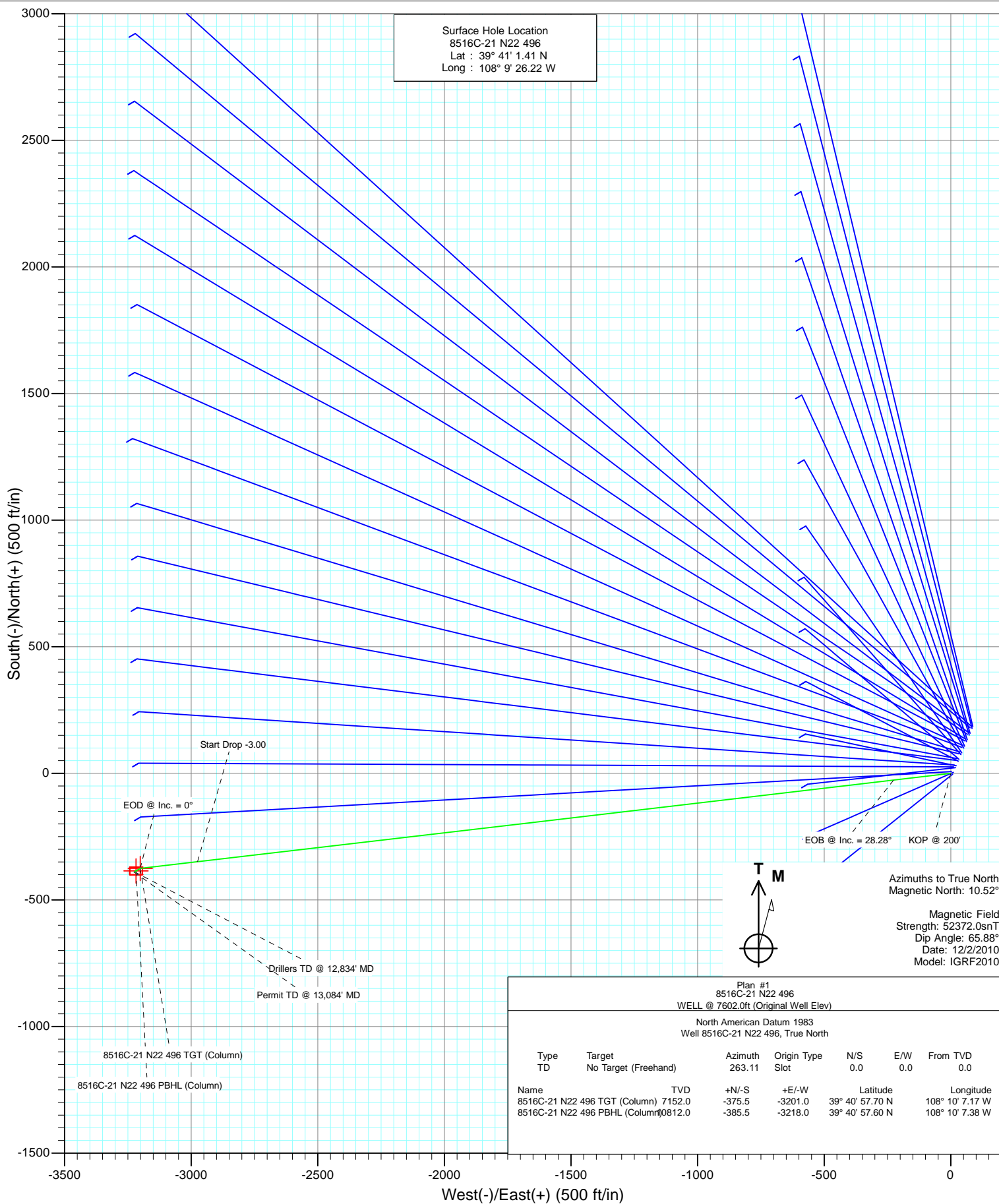
Azimuths to True North  
Magnetic North: 10.52°

Magnetic Field  
Strength: 52372.0snT  
Dip Angle: 65.88°  
Date: 12/2/2010  
Model: IGRF2010

Plan #1 8516C-21 N22 496 WELL @ 7602.0ft (Original Well Elev)						
North American Datum 1983 Well 8516C-21 N22 496, True North						
Type	Target	Azimuth	Origin	Type	N/S	E/W
TD	No Target (Freehand)	263.11	Slot	Slot	0.0	0.0
From TVD						
0.0						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
8516C-21 N22 496 TGT (Column)	7152.0	-375.5	-3201.0	39° 40' 57.70 N	108° 10' 7.17 W	
8516C-21 N22 496 PBHL (Column)	10812.0	-385.5	-3218.0	39° 40' 57.60 N	108° 10' 7.38 W	

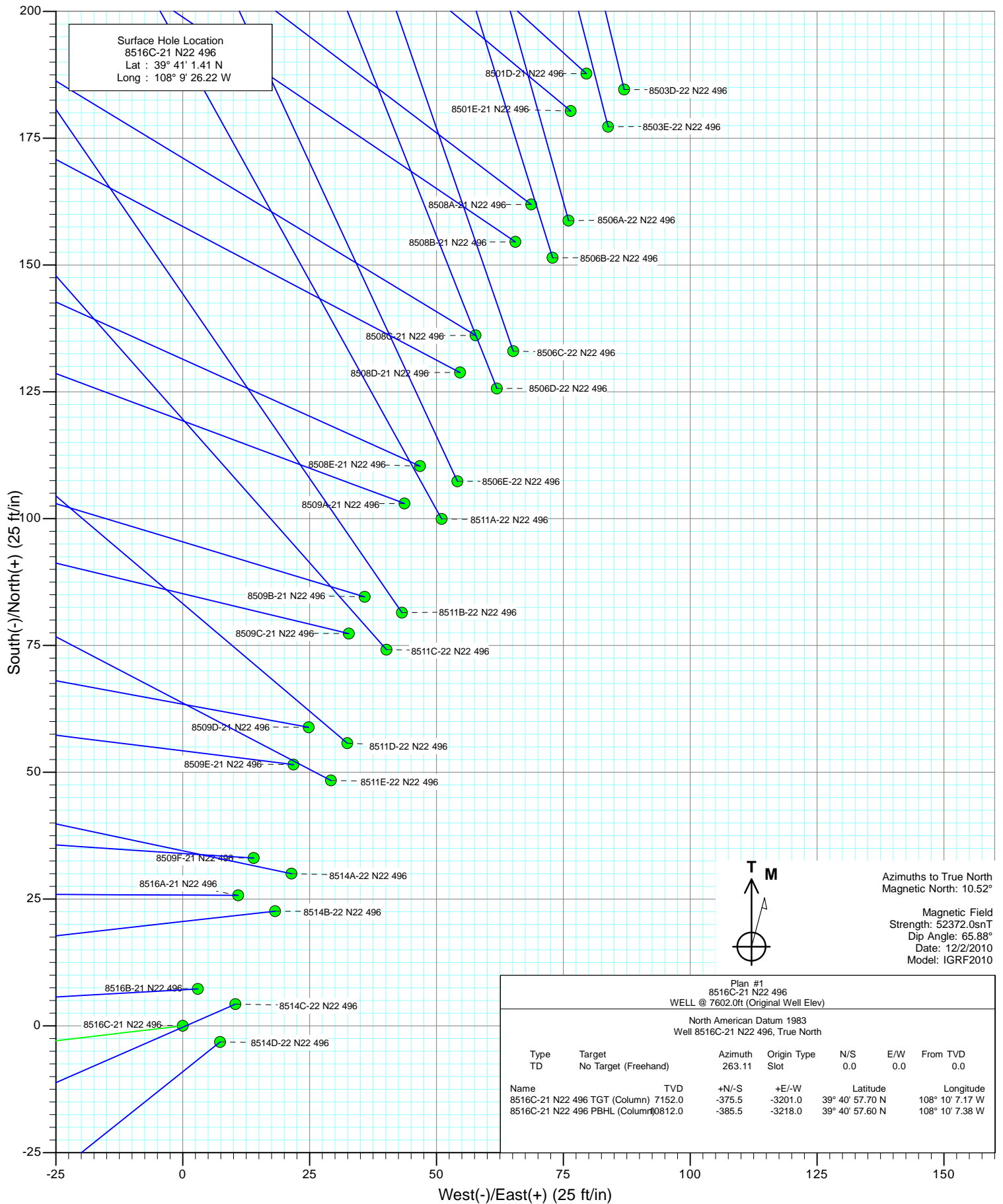


Project: Story Gulch  
Site: S22-T4S-R96W (N22 496) (Column Pattern)  
Well: 8516C-21 N22 496  
Wellbore: DD  
Design: Plan #1



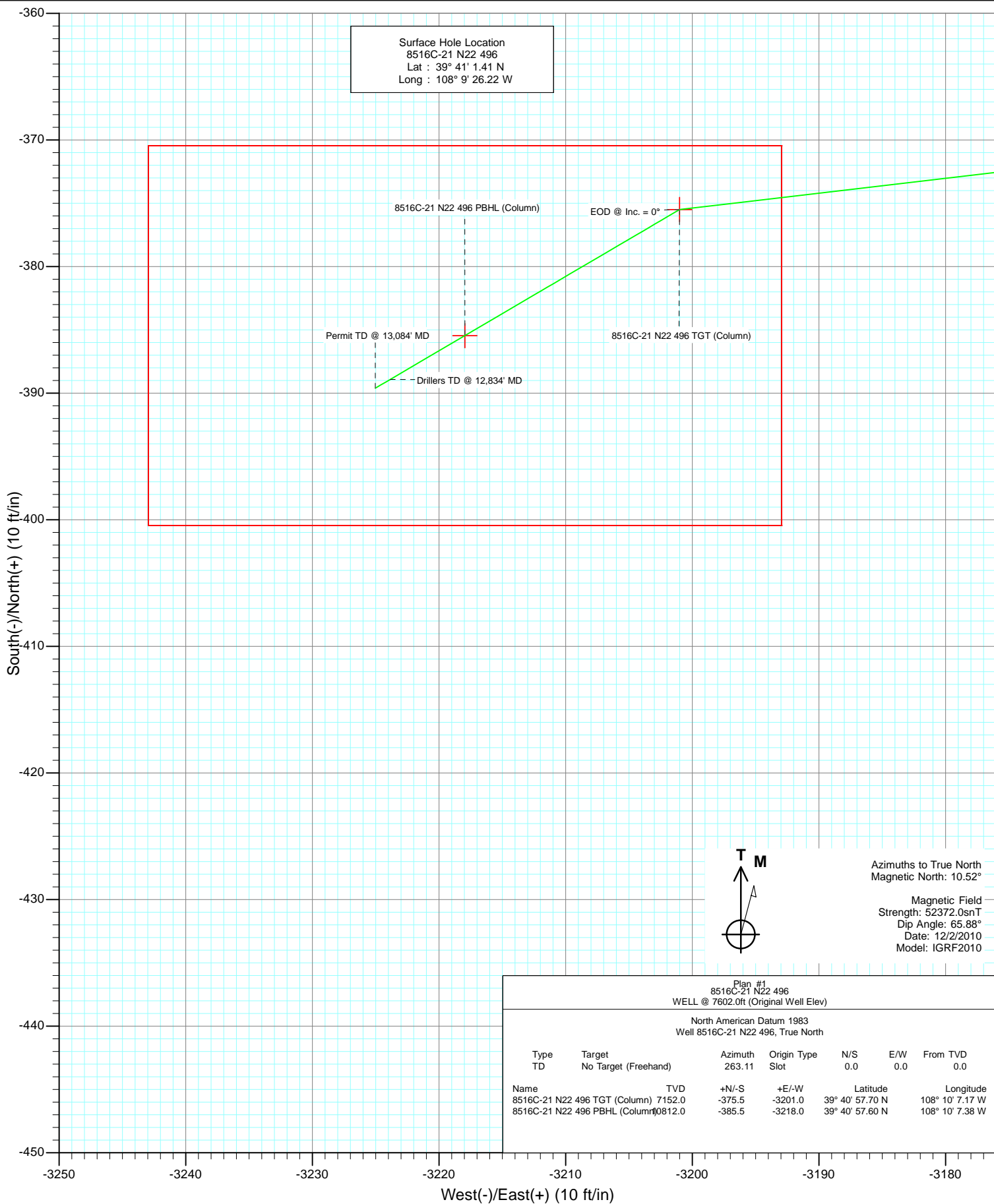


Project: Story Gulch  
Site: S22-T4S-R96W (N22 496) (Column Pattern)  
Well: 8516C-21 N22 496  
Wellbore: DD  
Design: Plan #1





Project: Story Gulch  
Site: S22-T4S-R96W (N22 496) (Column Pattern)  
Well: 8516C-21 N22 496  
Wellbore: DD  
Design: Plan #1



# Cathedral Energy

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8516C-21 N22 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7602.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	WELL @ 7602.0ft (Original Well Elev)
<b>Site:</b>	S22-T4S-R96W (N22 496) (Column Pattern)	<b>North Reference:</b>	True
<b>Well:</b>	8516C-21 N22 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		

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	8516C-21 N22 496					
Well Position	+N/-S	0.0 ft	Northing:	1,684,866.55 ft	Latitude:	39° 41' 1.41 N
	+E/-W	0.0 ft	Easting:	2,252,224.42 ft	Longitude:	108° 9' 26.22 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,569.0 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	12/2/2010	10.52	65.88	52,372

<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	263.11	

<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	
1,142.8	28.28	263.31	1,105.0	-26.6	-226.5	3.00	3.00	0.00	263.31	
6,982.0	28.28	263.31	6,247.0	-348.9	-2,974.5	0.00	0.00	0.00	0.00	
7,924.8	0.00	0.00	7,152.0	-375.5	-3,201.0	3.00	-3.00	0.00	180.00	8516C-21 N22 496 TC
8,050.1	0.31	239.58	7,277.3	-375.7	-3,201.3	0.25	0.25	-96.12	239.58	
11,584.9	0.31	239.58	10,812.0	-385.5	-3,218.0	0.00	0.00	0.00	0.00	8516C-21 N22 496 PI
12,834.9	0.31	239.58	12,062.0	-388.9	-3,223.9	0.00	0.00	0.00	0.00	
13,084.9	0.31	239.58	12,312.0	-389.6	-3,225.0	0.00	0.00	0.00	0.00	

# Cathedral Energy

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8516C-21 N22 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7602.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	WELL @ 7602.0ft (Original Well Elev)
<b>Site:</b>	S22-T4S-R96W (N22 496) (Column Pattern)	<b>North Reference:</b>	True
<b>Well:</b>	8516C-21 N22 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	
112.0	0.00	0.00	112.0	0.0	0.0	0.0	0.00	0.00	Para Creek (TVD)
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'
300.0	3.00	263.31	300.0	-0.3	-2.6	2.6	3.00	3.00	
400.0	6.00	263.31	399.6	-1.2	-10.4	10.5	3.00	3.00	
412.4	6.37	263.31	412.0	-1.4	-11.7	11.8	3.00	3.00	Mahog Bench (TVD)
472.9	8.19	263.31	472.0	-2.3	-19.3	19.5	3.00	3.00	Base B Groove (TVD)
500.0	9.00	263.31	498.8	-2.7	-23.4	23.5	3.00	3.00	
600.0	12.00	263.31	597.1	-4.9	-41.5	41.7	3.00	3.00	
700.0	15.00	263.31	694.3	-7.6	-64.6	65.1	3.00	3.00	
800.0	18.00	263.31	790.2	-10.9	-92.8	93.5	3.00	3.00	
900.0	21.00	263.31	884.4	-14.8	-126.0	126.9	3.00	3.00	
1,000.0	24.00	263.31	976.8	-19.2	-164.0	165.1	3.00	3.00	
1,100.0	27.00	263.31	1,067.1	-24.3	-206.7	208.2	3.00	3.00	
1,142.8	28.28	263.31	1,105.0	-26.6	-226.5	228.0	3.00	3.00	EOB @ Inc. = 28.28°
1,200.0	28.28	263.31	1,155.3	-29.7	-253.4	255.1	0.00	0.00	
1,300.0	28.28	263.31	1,243.4	-35.2	-300.4	302.5	0.00	0.00	
1,400.0	28.28	263.31	1,331.5	-40.8	-347.5	349.9	0.00	0.00	
1,500.0	28.28	263.31	1,419.5	-46.3	-394.6	397.3	0.00	0.00	
1,600.0	28.28	263.31	1,507.6	-51.8	-441.6	444.7	0.00	0.00	
1,700.0	28.28	263.31	1,595.6	-57.3	-488.7	492.0	0.00	0.00	
1,800.0	28.28	263.31	1,683.7	-62.8	-535.8	539.4	0.00	0.00	
1,900.0	28.28	263.31	1,771.8	-68.4	-582.8	586.8	0.00	0.00	
2,000.0	28.28	263.31	1,859.8	-73.9	-629.9	634.2	0.00	0.00	
2,100.0	28.28	263.31	1,947.9	-79.4	-676.9	681.6	0.00	0.00	
2,200.0	28.28	263.31	2,035.9	-84.9	-724.0	729.0	0.00	0.00	
2,300.0	28.28	263.31	2,124.0	-90.5	-771.1	776.4	0.00	0.00	
2,400.0	28.28	263.31	2,212.1	-96.0	-818.1	823.7	0.00	0.00	
2,500.0	28.28	263.31	2,300.1	-101.5	-865.2	871.1	0.00	0.00	
2,600.0	28.28	263.31	2,388.2	-107.0	-912.3	918.5	0.00	0.00	
2,700.0	28.28	263.31	2,476.3	-112.5	-959.3	965.9	0.00	0.00	
2,800.0	28.28	263.31	2,564.3	-118.1	-1,006.4	1,013.3	0.00	0.00	
2,900.0	28.28	263.31	2,652.4	-123.6	-1,053.4	1,060.7	0.00	0.00	
3,000.0	28.28	263.31	2,740.4	-129.1	-1,100.5	1,108.0	0.00	0.00	
3,100.0	28.28	263.31	2,828.5	-134.6	-1,147.6	1,155.4	0.00	0.00	
3,200.0	28.28	263.31	2,916.6	-140.1	-1,194.6	1,202.8	0.00	0.00	
3,300.0	28.28	263.31	3,004.6	-145.7	-1,241.7	1,250.2	0.00	0.00	
3,400.0	28.28	263.31	3,092.7	-151.2	-1,288.8	1,297.6	0.00	0.00	
3,500.0	28.28	263.31	3,180.7	-156.7	-1,335.8	1,345.0	0.00	0.00	
3,600.0	28.28	263.31	3,268.8	-162.2	-1,382.9	1,392.4	0.00	0.00	
3,700.0	28.28	263.31	3,356.9	-167.7	-1,429.9	1,439.7	0.00	0.00	
3,800.0	28.28	263.31	3,444.9	-173.3	-1,477.0	1,487.1	0.00	0.00	
3,900.0	28.28	263.31	3,533.0	-178.8	-1,524.1	1,534.5	0.00	0.00	
4,000.0	28.28	263.31	3,621.0	-184.3	-1,571.1	1,581.9	0.00	0.00	
4,100.0	28.28	263.31	3,709.1	-189.8	-1,618.2	1,629.3	0.00	0.00	
4,200.0	28.28	263.31	3,797.2	-195.3	-1,665.3	1,676.7	0.00	0.00	
4,300.0	28.28	263.31	3,885.2	-200.9	-1,712.3	1,724.0	0.00	0.00	
4,400.0	28.28	263.31	3,973.3	-206.4	-1,759.4	1,771.4	0.00	0.00	
4,444.0	28.28	263.31	4,012.0	-208.8	-1,780.1	1,792.3	0.00	0.00	Was G (TVD)
4,500.0	28.28	263.31	4,061.3	-211.9	-1,806.4	1,818.8	0.00	0.00	
4,600.0	28.28	263.31	4,149.4	-217.4	-1,853.5	1,866.2	0.00	0.00	

# Cathedral Energy

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8516C-21 N22 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7602.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	WELL @ 7602.0ft (Original Well Elev)
<b>Site:</b>	S22-T4S-R96W (N22 496) (Column Pattern)	<b>North Reference:</b>	True
<b>Well:</b>	8516C-21 N22 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	28.28	263.31	4,237.5	-222.9	-1,900.6	1,913.6	0.00	0.00	
4,800.0	28.28	263.31	4,325.5	-228.5	-1,947.6	1,961.0	0.00	0.00	
4,900.0	28.28	263.31	4,413.6	-234.0	-1,994.7	2,008.4	0.00	0.00	
5,000.0	28.28	263.31	4,501.6	-239.5	-2,041.7	2,055.7	0.00	0.00	
5,100.0	28.28	263.31	4,589.7	-245.0	-2,088.8	2,103.1	0.00	0.00	
5,200.0	28.28	263.31	4,677.8	-250.6	-2,135.9	2,150.5	0.00	0.00	
5,300.0	28.28	263.31	4,765.8	-256.1	-2,182.9	2,197.9	0.00	0.00	
5,400.0	28.28	263.31	4,853.9	-261.6	-2,230.0	2,245.3	0.00	0.00	
5,500.0	28.28	263.31	4,941.9	-267.1	-2,277.1	2,292.7	0.00	0.00	
5,600.0	28.28	263.31	5,030.0	-272.6	-2,324.1	2,340.0	0.00	0.00	
5,700.0	28.28	263.31	5,118.1	-278.2	-2,371.2	2,387.4	0.00	0.00	
5,800.0	28.28	263.31	5,206.1	-283.7	-2,418.2	2,434.8	0.00	0.00	
5,900.0	28.28	263.31	5,294.2	-289.2	-2,465.3	2,482.2	0.00	0.00	
6,000.0	28.28	263.31	5,382.3	-294.7	-2,512.4	2,529.6	0.00	0.00	
6,100.0	28.28	263.31	5,470.3	-300.2	-2,559.4	2,577.0	0.00	0.00	
6,200.0	28.28	263.31	5,558.4	-305.8	-2,606.5	2,624.4	0.00	0.00	
6,300.0	28.28	263.31	5,646.4	-311.3	-2,653.6	2,671.7	0.00	0.00	
6,400.0	28.28	263.31	5,734.5	-316.8	-2,700.6	2,719.1	0.00	0.00	
6,500.0	28.28	263.31	5,822.6	-322.3	-2,747.7	2,766.5	0.00	0.00	
6,600.0	28.28	263.31	5,910.6	-327.8	-2,794.7	2,813.9	0.00	0.00	
6,700.0	28.28	263.31	5,998.7	-333.4	-2,841.8	2,861.3	0.00	0.00	
6,800.0	28.28	263.31	6,086.7	-338.9	-2,888.9	2,908.7	0.00	0.00	
6,900.0	28.28	263.31	6,174.8	-344.4	-2,935.9	2,956.0	0.00	0.00	
6,982.0	28.28	263.31	6,247.0	-348.9	-2,974.5	2,994.9	0.00	0.00	Start Drop -3.00
7,000.0	27.74	263.31	6,262.9	-349.9	-2,982.9	3,003.4	3.00	-3.00	
7,100.0	24.74	263.31	6,352.6	-355.1	-3,026.8	3,047.6	3.00	-3.00	
7,200.0	21.74	263.31	6,444.5	-359.7	-3,066.0	3,087.0	3.00	-3.00	
7,300.0	18.74	263.31	6,538.3	-363.7	-3,100.4	3,121.6	3.00	-3.00	
7,400.0	15.74	263.31	6,633.8	-367.1	-3,129.8	3,151.3	3.00	-3.00	
7,500.0	12.74	263.31	6,730.7	-370.0	-3,154.3	3,175.9	3.00	-3.00	
7,600.0	9.74	263.31	6,828.7	-372.3	-3,173.6	3,195.4	3.00	-3.00	
7,700.0	6.74	263.31	6,927.7	-374.0	-3,187.9	3,209.7	3.00	-3.00	
7,800.0	3.74	263.31	7,027.3	-375.0	-3,197.0	3,218.9	3.00	-3.00	
7,884.8	1.20	263.31	7,112.0	-375.4	-3,200.6	3,222.5	3.00	-3.00	WF (TVD)
7,900.0	0.74	263.31	7,127.2	-375.5	-3,200.8	3,222.8	3.00	-3.00	
7,924.8	0.00	0.00	7,152.0	-375.5	-3,201.0	3,222.9	3.00	-3.00	EOD @ Inc. = 0° - TOG (TVD) - 8516C-21 N22
8,000.0	0.19	239.58	7,227.2	-375.6	-3,201.1	3,223.0	0.25	0.25	
8,050.1	0.31	239.58	7,277.3	-375.7	-3,201.3	3,223.2	0.25	0.25	
8,100.0	0.31	239.58	7,327.2	-375.8	-3,201.5	3,223.5	0.00	0.00	
8,200.0	0.31	239.58	7,427.2	-376.1	-3,202.0	3,224.0	0.00	0.00	
8,300.0	0.31	239.58	7,527.2	-376.4	-3,202.5	3,224.5	0.00	0.00	
8,400.0	0.31	239.58	7,627.2	-376.6	-3,202.9	3,225.0	0.00	0.00	
8,500.0	0.31	239.58	7,727.2	-376.9	-3,203.4	3,225.5	0.00	0.00	
8,600.0	0.31	239.58	7,827.2	-377.2	-3,203.9	3,226.0	0.00	0.00	
8,700.0	0.31	239.58	7,927.2	-377.5	-3,204.4	3,226.5	0.00	0.00	
8,800.0	0.31	239.58	8,027.2	-377.7	-3,204.8	3,227.0	0.00	0.00	
8,900.0	0.31	239.58	8,127.2	-378.0	-3,205.3	3,227.5	0.00	0.00	
9,000.0	0.31	239.58	8,227.2	-378.3	-3,205.8	3,228.0	0.00	0.00	
9,100.0	0.31	239.58	8,327.2	-378.6	-3,206.2	3,228.5	0.00	0.00	
9,200.0	0.31	239.58	8,427.2	-378.9	-3,206.7	3,229.0	0.00	0.00	
9,300.0	0.31	239.58	8,527.2	-379.1	-3,207.2	3,229.5	0.00	0.00	
9,400.0	0.31	239.58	8,627.2	-379.4	-3,207.7	3,230.0	0.00	0.00	



# Cathedral Energy

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8516C-21 N22 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7602.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	WELL @ 7602.0ft (Original Well Elev)
<b>Site:</b>	S22-T4S-R96W (N22 496) (Column Pattern)	<b>North Reference:</b>	True
<b>Well:</b>	8516C-21 N22 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	0.31	239.58	8,727.2	-379.7	-3,208.1	3,230.5	0.00	0.00	
9,600.0	0.31	239.58	8,827.2	-380.0	-3,208.6	3,231.0	0.00	0.00	
9,700.0	0.31	239.58	8,927.2	-380.2	-3,209.1	3,231.5	0.00	0.00	
9,800.0	0.31	239.58	9,027.1	-380.5	-3,209.5	3,232.0	0.00	0.00	
9,900.0	0.31	239.58	9,127.1	-380.8	-3,210.0	3,232.5	0.00	0.00	
10,000.0	0.31	239.58	9,227.1	-381.1	-3,210.5	3,233.0	0.00	0.00	
10,100.0	0.31	239.58	9,327.1	-381.3	-3,211.0	3,233.5	0.00	0.00	
10,200.0	0.31	239.58	9,427.1	-381.6	-3,211.4	3,234.0	0.00	0.00	
10,300.0	0.31	239.58	9,527.1	-381.9	-3,211.9	3,234.5	0.00	0.00	
10,400.0	0.31	239.58	9,627.1	-382.2	-3,212.4	3,235.0	0.00	0.00	
10,500.0	0.31	239.58	9,727.1	-382.4	-3,212.8	3,235.5	0.00	0.00	
10,600.0	0.31	239.58	9,827.1	-382.7	-3,213.3	3,236.0	0.00	0.00	
10,700.0	0.31	239.58	9,927.1	-383.0	-3,213.8	3,236.5	0.00	0.00	
10,800.0	0.31	239.58	10,027.1	-383.3	-3,214.3	3,237.0	0.00	0.00	
10,900.0	0.31	239.58	10,127.1	-383.6	-3,214.7	3,237.5	0.00	0.00	
11,000.0	0.31	239.58	10,227.1	-383.8	-3,215.2	3,238.0	0.00	0.00	
11,100.0	0.31	239.58	10,327.1	-384.1	-3,215.7	3,238.5	0.00	0.00	
11,200.0	0.31	239.58	10,427.1	-384.4	-3,216.1	3,239.0	0.00	0.00	
11,300.0	0.31	239.58	10,527.1	-384.7	-3,216.6	3,239.5	0.00	0.00	
11,400.0	0.31	239.58	10,627.1	-384.9	-3,217.1	3,240.0	0.00	0.00	
11,500.0	0.31	239.58	10,727.1	-385.2	-3,217.6	3,240.5	0.00	0.00	
11,584.9	0.31	239.58	10,812.0	-385.5	-3,218.0	3,241.0	0.00	0.00	Rins (TVD) - 8516C-21 N22 496 PBHL (Column
11,600.0	0.31	239.58	10,827.1	-385.5	-3,218.0	3,241.0	0.00	0.00	
11,700.0	0.31	239.58	10,927.1	-385.8	-3,218.5	3,241.5	0.00	0.00	
11,800.0	0.31	239.58	11,027.1	-386.0	-3,219.0	3,242.0	0.00	0.00	
11,900.0	0.31	239.58	11,127.1	-386.3	-3,219.4	3,242.5	0.00	0.00	
11,914.9	0.31	239.58	11,142.0	-386.4	-3,219.5	3,242.6	0.00	0.00	Cozz (TVD)
12,000.0	0.31	239.58	11,227.1	-386.6	-3,219.9	3,243.0	0.00	0.00	
12,100.0	0.31	239.58	11,327.1	-386.9	-3,220.4	3,243.5	0.00	0.00	
12,104.9	0.31	239.58	11,332.0	-386.9	-3,220.4	3,243.6	0.00	0.00	Corc (TVD)
12,200.0	0.31	239.58	11,427.1	-387.2	-3,220.9	3,244.0	0.00	0.00	
12,300.0	0.31	239.58	11,527.1	-387.4	-3,221.3	3,244.5	0.00	0.00	
12,384.9	0.31	239.58	11,612.0	-387.7	-3,221.7	3,245.0	0.00	0.00	Sego (TVD)
12,400.0	0.31	239.58	11,627.1	-387.7	-3,221.8	3,245.0	0.00	0.00	
12,500.0	0.31	239.58	11,727.1	-388.0	-3,222.3	3,245.5	0.00	0.00	
12,584.9	0.31	239.58	11,812.0	-388.2	-3,222.7	3,246.0	0.00	0.00	L Sego (TVD)
12,600.0	0.31	239.58	11,827.1	-388.3	-3,222.7	3,246.0	0.00	0.00	
12,700.0	0.31	239.58	11,927.1	-388.5	-3,223.2	3,246.5	0.00	0.00	
12,800.0	0.31	239.58	12,027.1	-388.8	-3,223.7	3,247.0	0.00	0.00	
12,834.9	0.31	239.58	12,062.0	-388.9	-3,223.9	3,247.2	0.00	0.00	Drillers TD @ 12,834' MD
12,900.0	0.31	239.58	12,127.1	-389.1	-3,224.2	3,247.5	0.00	0.00	
13,000.0	0.31	239.58	12,227.1	-389.4	-3,224.6	3,248.1	0.00	0.00	
13,084.9	0.31	239.58	12,312.0	-389.6	-3,225.0	3,248.5	0.00	0.00	



# Cathedral Energy

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8516C-21 N22 496
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 7602.0ft (Original Well Elev)
<b>Project:</b>	Story Gulch	<b>MD Reference:</b>	WELL @ 7602.0ft (Original Well Elev)
<b>Site:</b>	S22-T4S-R96W (N22 496) (Column Pattern)	<b>North Reference:</b>	True
<b>Well:</b>	8516C-21 N22 496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	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)		
8516C-21 N22 496 TGT	0.00	0.00	7,152.0	-375.5	-3,201.0	1,684,584.84	2,249,013.81	39° 40' 57.70 N	108° 10' 7.17 W
- plan hits target center									
- Point									
8516C-21 N22 496 PBH	0.00	0.00	10,812.0	-385.5	-3,218.0	1,684,575.38	2,248,996.57	39° 40' 57.60 N	108° 10' 7.38 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)			(°)	(°)	
112.0	112.0	Para Creek (TVD)				
412.4	412.0	Mahog Bench (TVD)				
472.9	472.0	Base B Groove (TVD)				
4,444.0	4,012.0	Was G (TVD)				
7,884.8	7,112.0	WF (TVD)				
7,924.8	7,152.0	TOG (TVD)				
11,584.9	10,812.0	Rlns (TVD)				
11,914.9	11,142.0	Cozz (TVD)				
12,104.9	11,332.0	Corc (TVD)				
12,384.9	11,612.0	Sego (TVD)				
12,584.9	11,812.0	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'
1,142.8	1,105.0	-26.6	-226.5	EOB @ Inc. = 28.28°
6,982.0	6,247.0	-348.9	-2,974.5	Start Drop -3.00
7,924.8	7,152.0	-375.5	-3,201.0	EOD @ Inc. = 0°
12,834.9	12,062.0	-375.7	-3,201.3	Drillers TD @ 12,834' MD
13,084.9	12,312.0	-385.5	-3,218.0	Permit TD @ 13,084' MD