

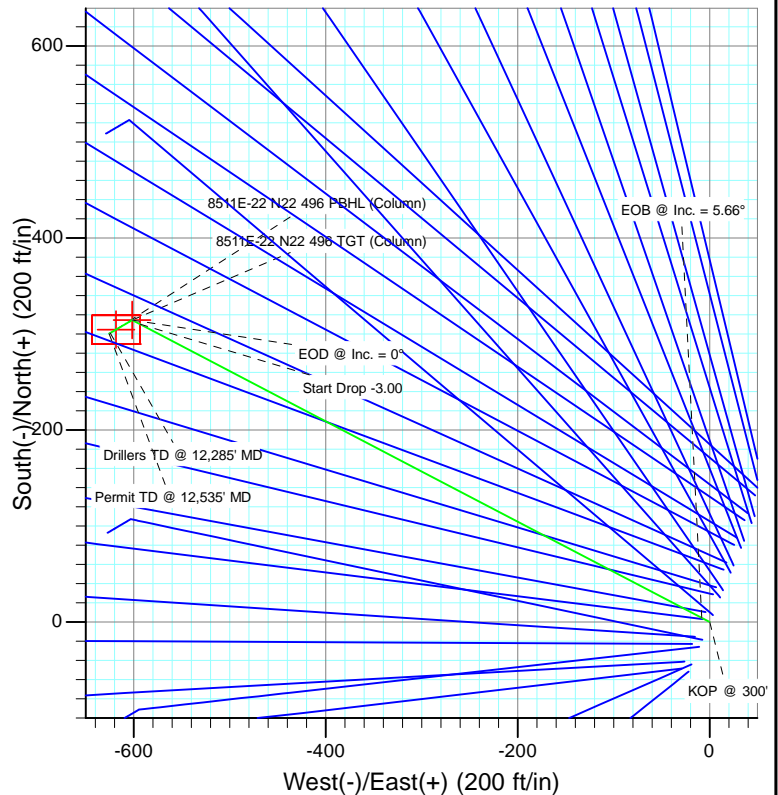


Project: Story Gulch  
Site: S22-T4S-R96W (N22 496) (Column Pattern)  
Well: 8511E-22 N22 496  
Wellbore: DD  
Design: Plan #1



#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	488.6	5.66	297.61	488.3	4.3	-8.2	3.00	297.61	9.3	
4	7186.7	5.66	297.61	7153.7	310.3	-593.4	0.00	0.00	669.2	
5	7375.2	0.00	0.00	7342.0	314.6	-601.6	3.00	180.00	678.5	8511E-22 N22 496 TGT (Column)
6	7500.8	0.31	239.58	7467.5	314.4	-601.9	0.25	239.58	678.7	
7	11035.3	0.31	239.58	11002.0	304.6	-618.6	0.00	0.00	689.5	8511E-22 N22 496 PBHL (Column)
8	12285.3	0.31	239.58	12252.0	301.2	-624.5	0.00	0.00	693.3	
9	12535.3	0.31	239.58	12502.0	300.5	-625.7	0.00	0.00	694.1	



#### FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation
302.0	302.0	Para Creek (TVD)
602.0	602.9	Mahog Bench (TVD)
662.0	663.2	Base B Groove (TVD)
4202.0	4220.5	Was G (TVD)
7302.0	7335.2	WF (TVD)
7342.0	7375.2	TOG (TVD)
11002.0	11035.3	Rins (TVD)
11332.0	11365.3	Cozz (TVD)
11522.0	11555.3	Corc (TVD)
11802.0	11835.3	Sego (TVD)
12002.0	12035.3	L Sego (TVD)



Azimuths to True North  
Magnetic North: 10.52°

Magnetic Field  
Strength: 52372.1snT  
Dip Angle: 65.88°  
Date: 12/2/2010  
Model: IGRF2010

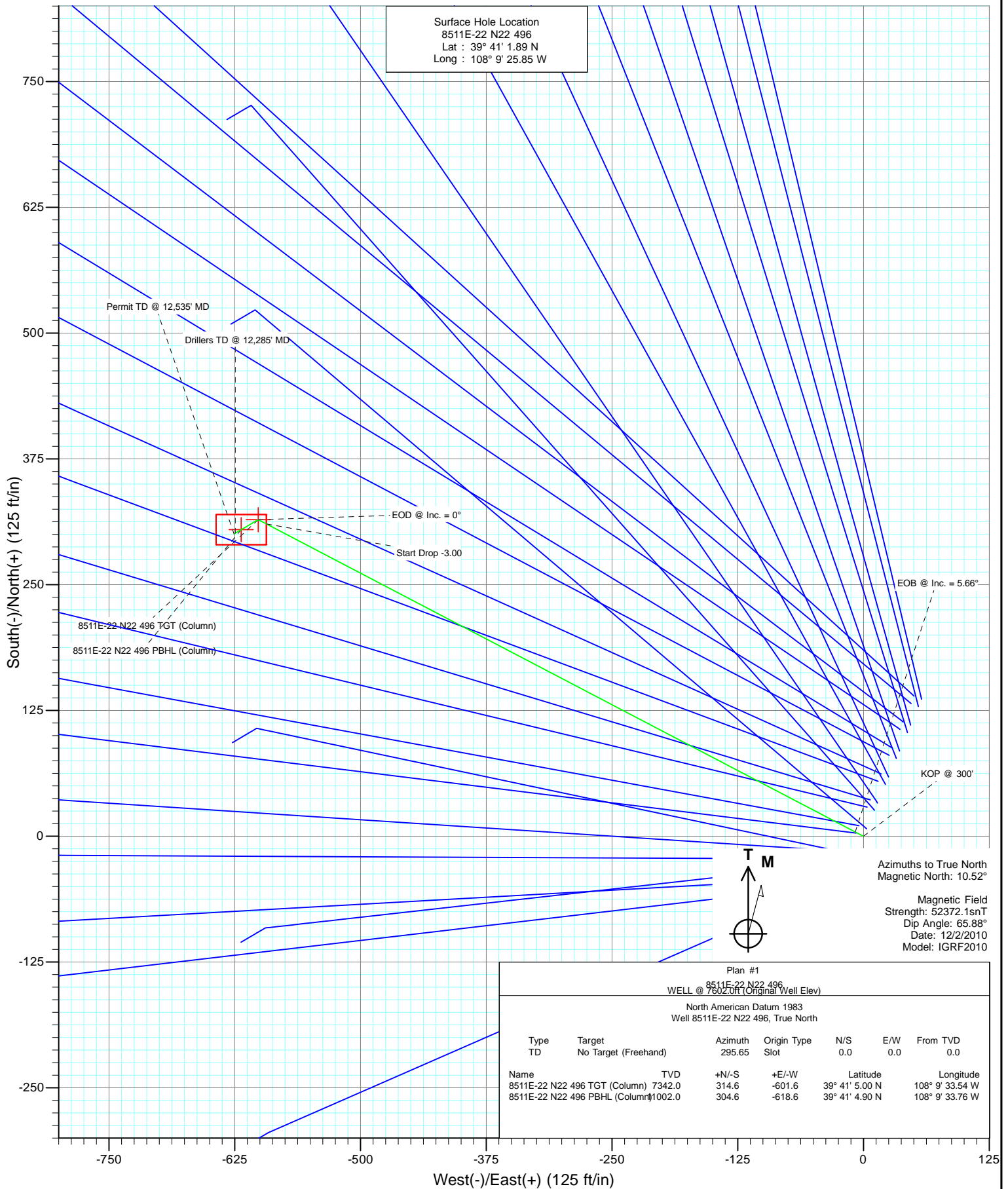
Plan #1  
8511E-22 N22 496  
WELL @ 7602.0ft (Original Well Elev)

North American Datum 1983  
Well 8511E-22 N22 496, True North

Type	Target	Azimuth	Origin	Type	N/S	E/W	From
TD	No Target (Freehand)	295.65	Slot		0.0	0.0	TVD
Name							
8511E-22 N22 496 TGT (Column)	7342.0	314.6	-601.6	39° 41' 5.00 N	108° 9' 33.54 W		
8511E-22 N22 496 PBHL (Column)	11002.0	304.6	-618.6	39° 41' 4.90 N	108° 9' 33.76 W		

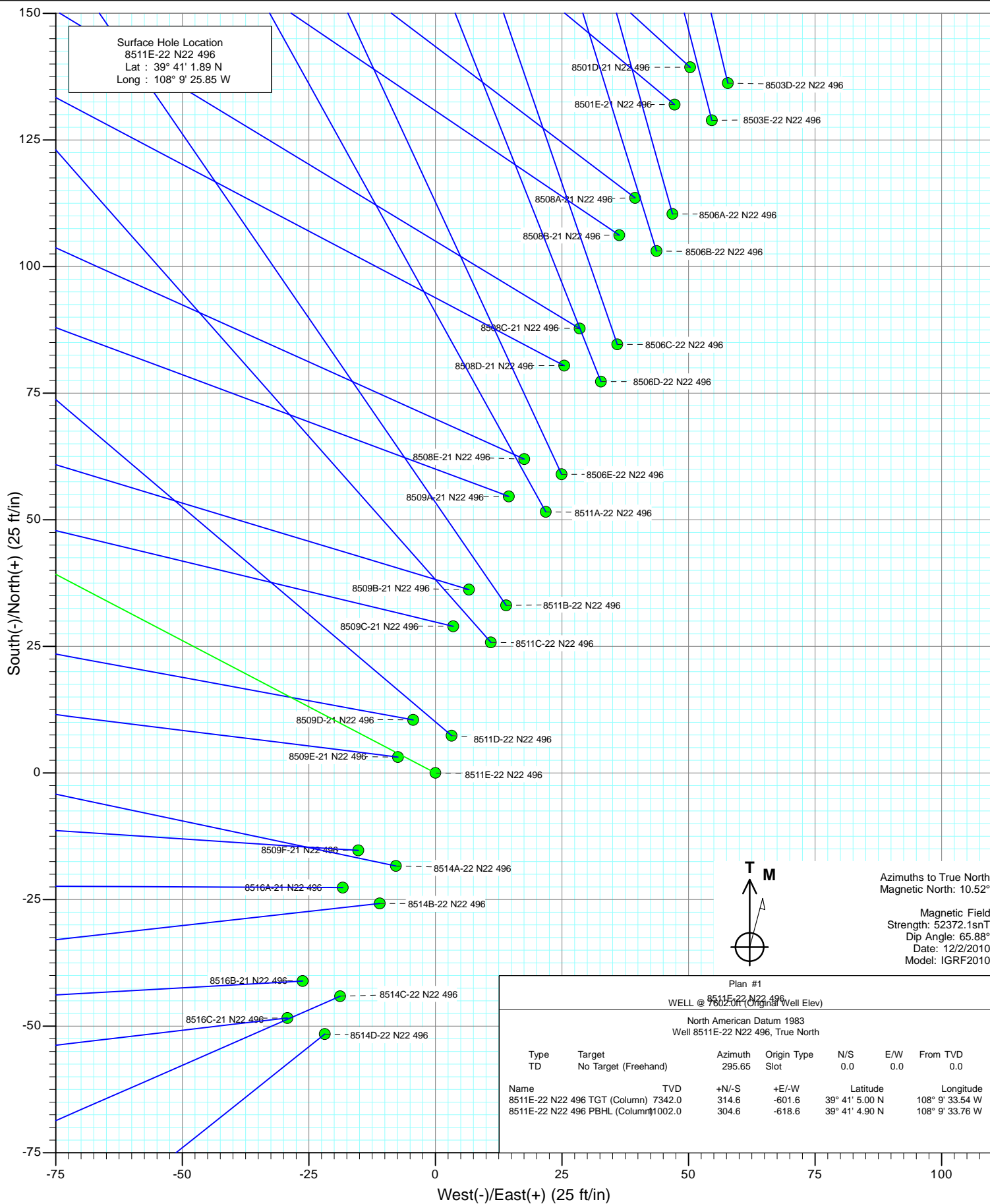


Project: Story Gulch  
Site: S22-T4S-R96W (N22 496) (Column Pattern)  
Well: 8511E-22 N22 496  
Wellbore: DD  
Design: Plan #1



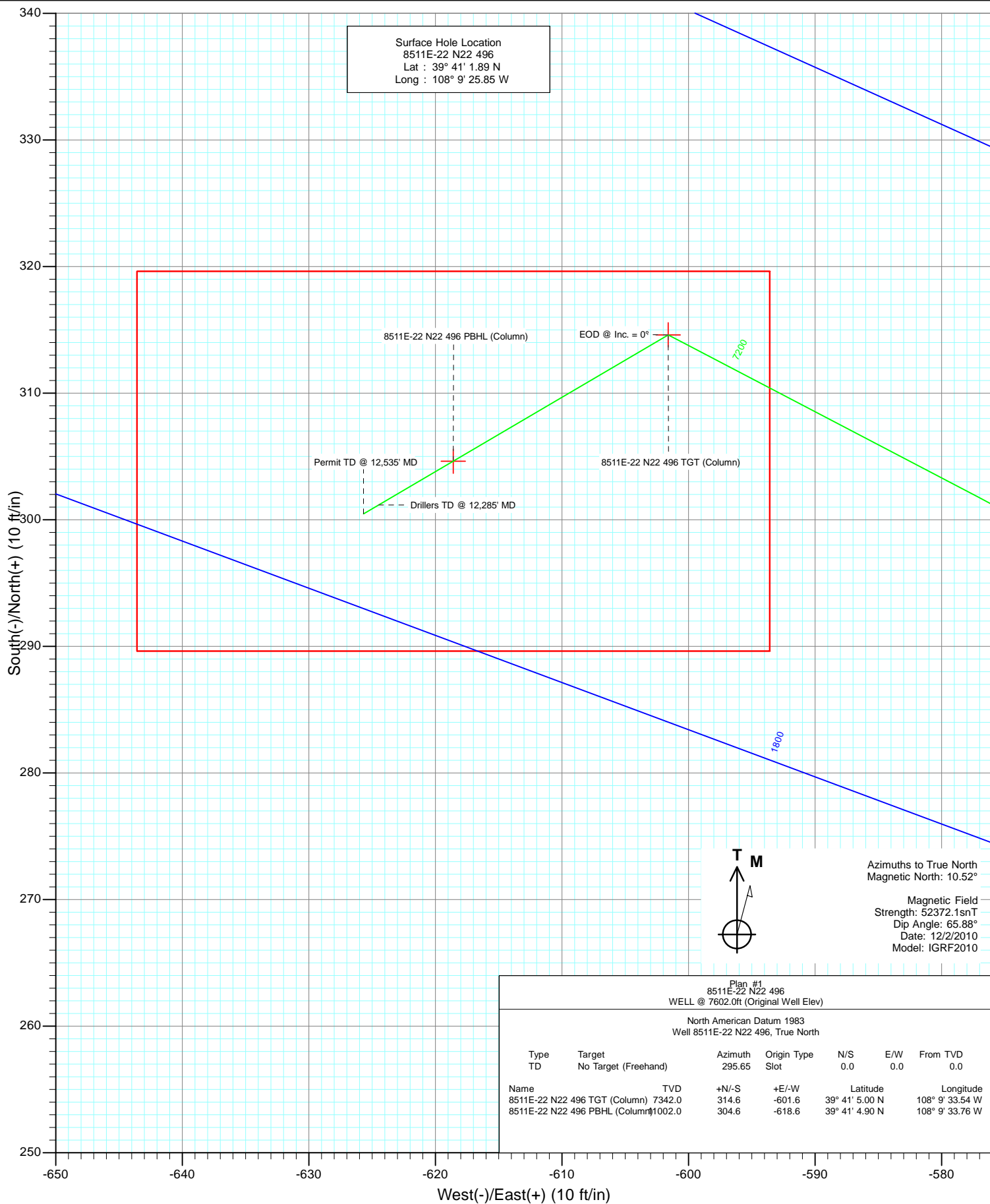


Project: Story Gulch  
Site: S22-T4S-R96W (N22 496) (Column Pattern)  
Well: 8511E-22 N22 496  
Wellbore: DD  
Design: Plan #1





Project: Story Gulch  
 Site: S22-T4S-R96W (N22 496) (Column Pattern)  
 Well: 8511E-22 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 8511E-22 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>	8511E-22 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	8511E-22 N22 496					
Well Position	+N/-S	0.0 ft	Northing:	1,684,914.06 ft	Latitude:	39° 41' 1.89 N
	+E/-W	0.0 ft	Easting:	2,252,255.03 ft	Longitude:	108° 9' 25.85 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	295.65

<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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
488.6	5.66	297.61	488.3	4.3	-8.2	3.00	3.00	0.00	297.61	
7,186.7	5.66	297.61	7,153.7	310.3	-593.4	0.00	0.00	0.00	0.00	
7,375.2	0.00	0.00	7,342.0	314.6	-601.6	3.00	-3.00	0.00	180.00	8511E-22 N22 496 TC
7,500.8	0.31	239.58	7,467.5	314.4	-601.9	0.25	0.25	-95.93	239.58	
11,035.3	0.31	239.58	11,002.0	304.6	-618.6	0.00	0.00	0.00	0.00	8511E-22 N22 496 PE
12,285.3	0.31	239.58	12,252.0	301.2	-624.5	0.00	0.00	0.00	0.00	
12,535.3	0.31	239.58	12,502.0	300.5	-625.7	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 8511E-22 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>	8511E-22 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	
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	KOP @ 300'
302.0	0.06	297.61	302.0	0.0	0.0	0.0	3.00	3.00	Para Creek (TVD)
400.0	3.00	297.61	400.0	1.2	-2.3	2.6	3.00	3.00	
488.6	5.66	297.61	488.3	4.3	-8.2	9.3	3.00	3.00	EOB @ Inc. = 5.66°
500.0	5.66	297.61	499.6	4.8	-9.2	10.4	0.00	0.00	
600.0	5.66	297.61	599.2	9.4	-18.0	20.3	0.00	0.00	
602.9	5.66	297.61	602.0	9.5	-18.2	20.6	0.00	0.00	Mahog Bench (TVD)
663.2	5.66	297.61	662.0	12.3	-23.5	26.5	0.00	0.00	Base B Groove (TVD)
700.0	5.66	297.61	698.7	14.0	-26.7	30.1	0.00	0.00	
800.0	5.66	297.61	798.2	18.5	-35.4	40.0	0.00	0.00	
900.0	5.66	297.61	897.7	23.1	-44.2	49.8	0.00	0.00	
1,000.0	5.66	297.61	997.2	27.7	-52.9	59.7	0.00	0.00	
1,100.0	5.66	297.61	1,096.7	32.2	-61.7	69.5	0.00	0.00	
1,200.0	5.66	297.61	1,196.2	36.8	-70.4	79.4	0.00	0.00	
1,300.0	5.66	297.61	1,295.7	41.4	-79.1	89.2	0.00	0.00	
1,400.0	5.66	297.61	1,395.3	45.9	-87.9	99.1	0.00	0.00	
1,500.0	5.66	297.61	1,494.8	50.5	-96.6	108.9	0.00	0.00	
1,600.0	5.66	297.61	1,594.3	55.1	-105.3	118.8	0.00	0.00	
1,700.0	5.66	297.61	1,693.8	59.7	-114.1	128.6	0.00	0.00	
1,800.0	5.66	297.61	1,793.3	64.2	-122.8	138.5	0.00	0.00	
1,900.0	5.66	297.61	1,892.8	68.8	-131.5	148.4	0.00	0.00	
2,000.0	5.66	297.61	1,992.3	73.4	-140.3	158.2	0.00	0.00	
2,100.0	5.66	297.61	2,091.8	77.9	-149.0	168.1	0.00	0.00	
2,200.0	5.66	297.61	2,191.4	82.5	-157.7	177.9	0.00	0.00	
2,300.0	5.66	297.61	2,290.9	87.1	-166.5	187.8	0.00	0.00	
2,400.0	5.66	297.61	2,390.4	91.6	-175.2	197.6	0.00	0.00	
2,500.0	5.66	297.61	2,489.9	96.2	-184.0	207.5	0.00	0.00	
2,600.0	5.66	297.61	2,589.4	100.8	-192.7	217.3	0.00	0.00	
2,700.0	5.66	297.61	2,688.9	105.3	-201.4	227.2	0.00	0.00	
2,800.0	5.66	297.61	2,788.4	109.9	-210.2	237.0	0.00	0.00	
2,900.0	5.66	297.61	2,887.9	114.5	-218.9	246.9	0.00	0.00	
3,000.0	5.66	297.61	2,987.5	119.0	-227.6	256.7	0.00	0.00	
3,100.0	5.66	297.61	3,087.0	123.6	-236.4	266.6	0.00	0.00	
3,200.0	5.66	297.61	3,186.5	128.2	-245.1	276.4	0.00	0.00	
3,300.0	5.66	297.61	3,286.0	132.7	-253.8	286.3	0.00	0.00	
3,400.0	5.66	297.61	3,385.5	137.3	-262.6	296.1	0.00	0.00	
3,500.0	5.66	297.61	3,485.0	141.9	-271.3	306.0	0.00	0.00	
3,600.0	5.66	297.61	3,584.5	146.4	-280.0	315.8	0.00	0.00	
3,700.0	5.66	297.61	3,684.1	151.0	-288.8	325.7	0.00	0.00	
3,800.0	5.66	297.61	3,783.6	155.6	-297.5	335.5	0.00	0.00	
3,900.0	5.66	297.61	3,883.1	160.2	-306.2	345.4	0.00	0.00	
4,000.0	5.66	297.61	3,982.6	164.7	-315.0	355.2	0.00	0.00	
4,100.0	5.66	297.61	4,082.1	169.3	-323.7	365.1	0.00	0.00	
4,200.0	5.66	297.61	4,181.6	173.9	-332.5	375.0	0.00	0.00	
4,220.5	5.66	297.61	4,202.0	174.8	-334.2	377.0	0.00	0.00	Was G (TVD)
4,300.0	5.66	297.61	4,281.1	178.4	-341.2	384.8	0.00	0.00	
4,400.0	5.66	297.61	4,380.6	183.0	-349.9	394.7	0.00	0.00	
4,500.0	5.66	297.61	4,480.2	187.6	-358.7	404.5	0.00	0.00	
4,600.0	5.66	297.61	4,579.7	192.1	-367.4	414.4	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 8511E-22 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>	8511E-22 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	5.66	297.61	4,679.2	196.7	-376.1	424.2	0.00	0.00	
4,800.0	5.66	297.61	4,778.7	201.3	-384.9	434.1	0.00	0.00	
4,900.0	5.66	297.61	4,878.2	205.8	-393.6	443.9	0.00	0.00	
5,000.0	5.66	297.61	4,977.7	210.4	-402.3	453.8	0.00	0.00	
5,100.0	5.66	297.61	5,077.2	215.0	-411.1	463.6	0.00	0.00	
5,200.0	5.66	297.61	5,176.7	219.5	-419.8	473.5	0.00	0.00	
5,300.0	5.66	297.61	5,276.3	224.1	-428.5	483.3	0.00	0.00	
5,400.0	5.66	297.61	5,375.8	228.7	-437.3	493.2	0.00	0.00	
5,500.0	5.66	297.61	5,475.3	233.2	-446.0	503.0	0.00	0.00	
5,600.0	5.66	297.61	5,574.8	237.8	-454.8	512.9	0.00	0.00	
5,700.0	5.66	297.61	5,674.3	242.4	-463.5	522.7	0.00	0.00	
5,800.0	5.66	297.61	5,773.8	246.9	-472.2	532.6	0.00	0.00	
5,900.0	5.66	297.61	5,873.3	251.5	-481.0	542.4	0.00	0.00	
6,000.0	5.66	297.61	5,972.8	256.1	-489.7	552.3	0.00	0.00	
6,100.0	5.66	297.61	6,072.4	260.7	-498.4	562.1	0.00	0.00	
6,200.0	5.66	297.61	6,171.9	265.2	-507.2	572.0	0.00	0.00	
6,300.0	5.66	297.61	6,271.4	269.8	-515.9	581.8	0.00	0.00	
6,400.0	5.66	297.61	6,370.9	274.4	-524.6	591.7	0.00	0.00	
6,500.0	5.66	297.61	6,470.4	278.9	-533.4	601.6	0.00	0.00	
6,600.0	5.66	297.61	6,569.9	283.5	-542.1	611.4	0.00	0.00	
6,700.0	5.66	297.61	6,669.4	288.1	-550.8	621.3	0.00	0.00	
6,800.0	5.66	297.61	6,769.0	292.6	-559.6	631.1	0.00	0.00	
6,900.0	5.66	297.61	6,868.5	297.2	-568.3	641.0	0.00	0.00	
7,000.0	5.66	297.61	6,968.0	301.8	-577.1	650.8	0.00	0.00	
7,100.0	5.66	297.61	7,067.5	306.3	-585.8	660.7	0.00	0.00	
7,186.7	5.66	297.61	7,153.7	310.3	-593.4	669.2	0.00	0.00	Start Drop -3.00
7,200.0	5.26	297.61	7,167.0	310.9	-594.5	670.5	3.00	-3.00	
7,300.0	2.26	297.61	7,266.8	313.9	-600.3	677.0	3.00	-3.00	
7,335.2	1.20	297.61	7,302.0	314.4	-601.2	678.1	3.00	-3.00	WF (TVD)
7,375.2	0.00	0.00	7,342.0	314.6	-601.6	678.5	3.00	-3.00	EOD @ Inc. = 0° - TOG (TVD) - 8511E-22 N22
7,400.0	0.06	239.58	7,366.8	314.6	-601.6	678.5	0.25	0.25	
7,500.0	0.31	239.58	7,466.8	314.4	-601.9	678.7	0.25	0.25	
7,500.8	0.31	239.58	7,467.5	314.4	-601.9	678.7	0.25	0.25	
7,600.0	0.31	239.58	7,566.8	314.2	-602.4	679.0	0.00	0.00	
7,700.0	0.31	239.58	7,666.8	313.9	-602.8	679.3	0.00	0.00	
7,800.0	0.31	239.58	7,766.8	313.6	-603.3	679.6	0.00	0.00	
7,900.0	0.31	239.58	7,866.8	313.3	-603.8	679.9	0.00	0.00	
8,000.0	0.31	239.58	7,966.8	313.0	-604.3	680.2	0.00	0.00	
8,100.0	0.31	239.58	8,066.8	312.8	-604.7	680.5	0.00	0.00	
8,200.0	0.31	239.58	8,166.8	312.5	-605.2	680.8	0.00	0.00	
8,300.0	0.31	239.58	8,266.8	312.2	-605.7	681.1	0.00	0.00	
8,400.0	0.31	239.58	8,366.7	311.9	-606.1	681.4	0.00	0.00	
8,500.0	0.31	239.58	8,466.7	311.7	-606.6	681.7	0.00	0.00	
8,600.0	0.31	239.58	8,566.7	311.4	-607.1	682.1	0.00	0.00	
8,700.0	0.31	239.58	8,666.7	311.1	-607.6	682.4	0.00	0.00	
8,800.0	0.31	239.58	8,766.7	310.8	-608.0	682.7	0.00	0.00	
8,900.0	0.31	239.58	8,866.7	310.5	-608.5	683.0	0.00	0.00	
9,000.0	0.31	239.58	8,966.7	310.3	-609.0	683.3	0.00	0.00	
9,100.0	0.31	239.58	9,066.7	310.0	-609.4	683.6	0.00	0.00	
9,200.0	0.31	239.58	9,166.7	309.7	-609.9	683.9	0.00	0.00	
9,300.0	0.31	239.58	9,266.7	309.4	-610.4	684.2	0.00	0.00	
9,400.0	0.31	239.58	9,366.7	309.2	-610.9	684.5	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 8511E-22 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>	8511E-22 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	9,466.7	308.9	-611.3	684.8	0.00	0.00	
9,600.0	0.31	239.58	9,566.7	308.6	-611.8	685.1	0.00	0.00	
9,700.0	0.31	239.58	9,666.7	308.3	-612.3	685.4	0.00	0.00	
9,800.0	0.31	239.58	9,766.7	308.1	-612.8	685.7	0.00	0.00	
9,900.0	0.31	239.58	9,866.7	307.8	-613.2	686.0	0.00	0.00	
10,000.0	0.31	239.58	9,966.7	307.5	-613.7	686.3	0.00	0.00	
10,100.0	0.31	239.58	10,066.7	307.2	-614.2	686.6	0.00	0.00	
10,200.0	0.31	239.58	10,166.7	306.9	-614.6	686.9	0.00	0.00	
10,300.0	0.31	239.58	10,266.7	306.7	-615.1	687.2	0.00	0.00	
10,400.0	0.31	239.58	10,366.7	306.4	-615.6	687.6	0.00	0.00	
10,500.0	0.31	239.58	10,466.7	306.1	-616.1	687.9	0.00	0.00	
10,600.0	0.31	239.58	10,566.7	305.8	-616.5	688.2	0.00	0.00	
10,700.0	0.31	239.58	10,666.7	305.6	-617.0	688.5	0.00	0.00	
10,800.0	0.31	239.58	10,766.7	305.3	-617.5	688.8	0.00	0.00	
10,900.0	0.31	239.58	10,866.7	305.0	-618.0	689.1	0.00	0.00	
11,000.0	0.31	239.58	10,966.7	304.7	-618.4	689.4	0.00	0.00	
11,035.3	0.31	239.58	11,002.0	304.6	-618.6	689.5	0.00	0.00	Rins (TVD) - 8511E-22 N22 496 PBHL (Column
11,100.0	0.31	239.58	11,066.7	304.4	-618.9	689.7	0.00	0.00	
11,200.0	0.31	239.58	11,166.7	304.2	-619.4	690.0	0.00	0.00	
11,300.0	0.31	239.58	11,266.7	303.9	-619.8	690.3	0.00	0.00	
11,365.3	0.31	239.58	11,332.0	303.7	-620.1	690.5	0.00	0.00	Cozz (TVD)
11,400.0	0.31	239.58	11,366.7	303.6	-620.3	690.6	0.00	0.00	
11,500.0	0.31	239.58	11,466.7	303.3	-620.8	690.9	0.00	0.00	
11,555.3	0.31	239.58	11,522.0	303.2	-621.0	691.1	0.00	0.00	Corc (TVD)
11,600.0	0.31	239.58	11,566.7	303.1	-621.3	691.2	0.00	0.00	
11,700.0	0.31	239.58	11,666.7	302.8	-621.7	691.5	0.00	0.00	
11,800.0	0.31	239.58	11,766.7	302.5	-622.2	691.8	0.00	0.00	
11,835.3	0.31	239.58	11,802.0	302.4	-622.4	691.9	0.00	0.00	Sego (TVD)
11,900.0	0.31	239.58	11,866.7	302.2	-622.7	692.1	0.00	0.00	
12,000.0	0.31	239.58	11,966.7	302.0	-623.1	692.4	0.00	0.00	
12,035.3	0.31	239.58	12,002.0	301.9	-623.3	692.6	0.00	0.00	L Sego (TVD)
12,100.0	0.31	239.58	12,066.7	301.7	-623.6	692.8	0.00	0.00	
12,200.0	0.31	239.58	12,166.7	301.4	-624.1	693.1	0.00	0.00	
12,285.3	0.31	239.58	12,252.0	301.2	-624.5	693.3	0.00	0.00	Drillers TD @ 12,285' MD
12,300.0	0.31	239.58	12,266.7	301.1	-624.6	693.4	0.00	0.00	
12,400.0	0.31	239.58	12,366.7	300.8	-625.0	693.7	0.00	0.00	
12,500.0	0.31	239.58	12,466.7	300.6	-625.5	694.0	0.00	0.00	
12,535.3	0.31	239.58	12,502.0	300.5	-625.7	694.1	0.00	0.00	Permit TD @ 12,535' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
8511E-22 N22 496 PBH	0.00	0.00	11,002.0	304.6	-618.6	1,685,236.64	2,251,645.61	39° 41' 4.90 N	108° 9' 33.76 W
- plan hits target center									
- Rectangle (sides W30.0 H50.0 D0.0)									
8511E-22 N22 496 TGT	0.00	0.00	7,342.0	314.6	-601.6	1,685,246.12	2,251,662.89	39° 41' 5.00 N	108° 9' 33.54 W
- plan hits target center									
- Point									



# Cathedral Energy

## Planning Report

<b>Database:</b>	EDM 5000.1 US Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 8511E-22 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>	8511E-22 N22 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 (°)
302.0	302.0	Para Creek (TVD)			
602.9	602.0	Mahog Bench (TVD)			
663.2	662.0	Base B Groove (TVD)			
4,220.5	4,202.0	Was G (TVD)			
7,335.2	7,302.0	WF (TVD)			
7,375.2	7,342.0	TOG (TVD)			
11,035.3	11,002.0	Rlns (TVD)			
11,365.3	11,332.0	Cozz (TVD)			
11,555.3	11,522.0	Corc (TVD)			
11,835.3	11,802.0	Sego (TVD)			
12,035.3	12,002.0	L Sego (TVD)			

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.0	300.0	0.0	0.0	KOP @ 300'
488.6	488.3	4.3	-8.2	EOB @ Inc. = 5.66°
7,186.7	7,153.7	310.3	-593.4	Start Drop -3.00
7,375.2	7,342.0	314.6	-601.6	EOD @ Inc. = 0°
12,285.3	12,252.0	314.4	-601.9	Drillers TD @ 12,285' MD
12,535.3	12,502.0	304.6	-618.6	Permit TD @ 12,535' MD