

# **DJ/Paradox/WTX**

**Wattenberg**

**New Drills**

**Goltl 8-6-26**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**14 May, 2010**

# EnCana Corporation

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Well Goltl 8-6-26
<b>Company:</b>	DJ/Paradox/WTX	<b>TVD Reference:</b>	WELL @ 5183.0ft (Original Well Elev)
<b>Project:</b>	Wattenberg	<b>MD Reference:</b>	WELL @ 5183.0ft (Original Well Elev)
<b>Site:</b>	New Drills	<b>North Reference:</b>	True
<b>Well:</b>	Goltl 8-6-26	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	Wattenberg,		
<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 Northern Zone		

Site		New Drills			
Site Position:		Northing:	1,252,450.66 ft	Latitude:	40° 1' 32.016 N
From:	Lat/Long	Easting:	3,120,627.66 ft	Longitude:	105° 4' 9.336 W
Position Uncertainty:	ft	Slot Radius:	in	Grid Convergence:	0.28 °

Well	Goltl 8-6-26					
Well Position	+N/-S	-2,913.2 ft	Northing:	1,249,714.14 ft	Latitude:	40° 1' 3.396 N
	+E/-W	29,267.9 ft	Easting:	3,149,912.58 ft	Longitude:	104° 57' 53.100 W
Position Uncertainty		ft	Wellhead Elevation:	ft	Ground Level:	5,170.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	12/31/2009	9.09	66.76	53,078

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<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	73.54

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,230.0	0.00	0.00	1,230.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,685.2	9.10	73.54	1,683.3	10.2	34.6	2.00	2.00	0.00	73.54	
7,079.6	9.10	73.54	7,009.7	252.1	853.2	0.00	0.00	0.00	0.00	
7,534.8	0.00	0.00	7,463.0	262.3	887.8	2.00	-2.00	0.00	180.00	
8,634.8	0.00	0.00	8,563.0	262.3	887.8	0.00	0.00	0.00	0.00	Goltl 8-6-26 PBHL

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## Planning Report

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<b>Project:</b>	Wattenberg	<b>MD Reference:</b>	WELL @ 5183.0ft (Original Well Elev)
<b>Site:</b>	New Drills	<b>North Reference:</b>	True
<b>Well:</b>	Golt 8-6-26	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #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)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,180.0	0.00	0.00	1,180.0	0.0	0.0	0.0	0.00	0.00	0.00
Surface									
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,230.0	0.00	0.00	1,230.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	1.40	73.54	1,300.0	0.2	0.8	0.9	2.00	2.00	0.00
1,400.0	3.40	73.54	1,399.9	1.4	4.8	5.0	2.00	2.00	0.00
1,500.0	5.40	73.54	1,499.6	3.6	12.2	12.7	2.00	2.00	0.00
1,600.0	7.40	73.54	1,599.0	6.8	22.9	23.9	2.00	2.00	0.00
1,685.2	9.10	73.54	1,683.3	10.2	34.6	36.1	2.00	2.00	0.00
1,700.0	9.10	73.54	1,697.9	10.9	36.9	38.4	0.00	0.00	0.00
1,800.0	9.10	73.54	1,796.6	15.4	52.0	54.3	0.00	0.00	0.00
1,900.0	9.10	73.54	1,895.4	19.9	67.2	70.1	0.00	0.00	0.00
2,000.0	9.10	73.54	1,994.1	24.3	82.4	85.9	0.00	0.00	0.00
2,100.0	9.10	73.54	2,092.9	28.8	97.6	101.7	0.00	0.00	0.00
2,200.0	9.10	73.54	2,191.6	33.3	112.7	117.6	0.00	0.00	0.00
2,300.0	9.10	73.54	2,290.3	37.8	127.9	133.4	0.00	0.00	0.00
2,400.0	9.10	73.54	2,389.1	42.3	143.1	149.2	0.00	0.00	0.00
2,500.0	9.10	73.54	2,487.8	46.8	158.3	165.0	0.00	0.00	0.00
2,600.0	9.10	73.54	2,586.6	51.2	173.4	180.8	0.00	0.00	0.00
2,700.0	9.10	73.54	2,685.3	55.7	188.6	196.7	0.00	0.00	0.00
2,800.0	9.10	73.54	2,784.0	60.2	203.8	212.5	0.00	0.00	0.00
2,900.0	9.10	73.54	2,882.8	64.7	219.0	228.3	0.00	0.00	0.00
3,000.0	9.10	73.54	2,981.5	69.2	234.1	244.1	0.00	0.00	0.00
3,100.0	9.10	73.54	3,080.3	73.7	249.3	260.0	0.00	0.00	0.00
3,200.0	9.10	73.54	3,179.0	78.1	264.5	275.8	0.00	0.00	0.00
3,300.0	9.10	73.54	3,277.7	82.6	279.7	291.6	0.00	0.00	0.00
3,400.0	9.10	73.54	3,376.5	87.1	294.8	307.4	0.00	0.00	0.00
3,500.0	9.10	73.54	3,475.2	91.6	310.0	323.3	0.00	0.00	0.00
3,600.0	9.10	73.54	3,574.0	96.1	325.2	339.1	0.00	0.00	0.00
3,700.0	9.10	73.54	3,672.7	100.6	340.4	354.9	0.00	0.00	0.00
3,800.0	9.10	73.54	3,771.4	105.0	355.5	370.7	0.00	0.00	0.00
3,900.0	9.10	73.54	3,870.2	109.5	370.7	386.6	0.00	0.00	0.00
4,000.0	9.10	73.54	3,968.9	114.0	385.9	402.4	0.00	0.00	0.00
4,100.0	9.10	73.54	4,067.7	118.5	401.1	418.2	0.00	0.00	0.00
4,200.0	9.10	73.54	4,166.4	123.0	416.2	434.0	0.00	0.00	0.00
4,300.0	9.10	73.54	4,265.1	127.5	431.4	449.9	0.00	0.00	0.00
4,400.0	9.10	73.54	4,363.9	131.9	446.6	465.7	0.00	0.00	0.00
4,500.0	9.10	73.54	4,462.6	136.4	461.8	481.5	0.00	0.00	0.00
4,600.0	9.10	73.54	4,561.4	140.9	476.9	497.3	0.00	0.00	0.00
4,700.0	9.10	73.54	4,660.1	145.4	492.1	513.2	0.00	0.00	0.00
4,800.0	9.10	73.54	4,758.8	149.9	507.3	529.0	0.00	0.00	0.00
4,895.4	9.10	73.54	4,853.0	154.1	521.8	544.1	0.00	0.00	0.00

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<b>Site:</b>	New Drills	<b>North Reference:</b>	True
<b>Well:</b>	Golt 8-6-26	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #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)	Turn Rate (°/100ft)
<b>Sussex</b>									
4,900.0	9.10	73.54	4,857.6	154.4	522.5	544.8	0.00	0.00	0.00
5,000.0	9.10	73.54	4,956.3	158.8	537.7	560.6	0.00	0.00	0.00
5,100.0	9.10	73.54	5,055.1	163.3	552.8	576.4	0.00	0.00	0.00
5,200.0	9.10	73.54	5,153.8	167.8	568.0	592.3	0.00	0.00	0.00
5,300.0	9.10	73.54	5,252.5	172.3	583.2	608.1	0.00	0.00	0.00
5,400.0	9.10	73.54	5,351.3	176.8	598.4	623.9	0.00	0.00	0.00
5,492.9	9.10	73.54	5,443.0	180.9	612.4	638.6	0.00	0.00	0.00
<b>Shannon</b>									
5,500.0	9.10	73.54	5,450.0	181.3	613.5	639.7	0.00	0.00	0.00
5,600.0	9.10	73.54	5,548.8	185.7	628.7	655.6	0.00	0.00	0.00
5,700.0	9.10	73.54	5,647.5	190.2	643.9	671.4	0.00	0.00	0.00
5,800.0	9.10	73.54	5,746.2	194.7	659.1	687.2	0.00	0.00	0.00
5,900.0	9.10	73.54	5,845.0	199.2	674.2	703.0	0.00	0.00	0.00
6,000.0	9.10	73.54	5,943.7	203.7	689.4	718.9	0.00	0.00	0.00
6,100.0	9.10	73.54	6,042.5	208.2	704.6	734.7	0.00	0.00	0.00
6,200.0	9.10	73.54	6,141.2	212.6	719.8	750.5	0.00	0.00	0.00
6,300.0	9.10	73.54	6,239.9	217.1	734.9	766.3	0.00	0.00	0.00
6,400.0	9.10	73.54	6,338.7	221.6	750.1	782.2	0.00	0.00	0.00
6,500.0	9.10	73.54	6,437.4	226.1	765.3	798.0	0.00	0.00	0.00
6,600.0	9.10	73.54	6,536.2	230.6	780.5	813.8	0.00	0.00	0.00
6,700.0	9.10	73.54	6,634.9	235.1	795.6	829.6	0.00	0.00	0.00
6,800.0	9.10	73.54	6,733.6	239.5	810.8	845.5	0.00	0.00	0.00
6,900.0	9.10	73.54	6,832.4	244.0	826.0	861.3	0.00	0.00	0.00
7,000.0	9.10	73.54	6,931.1	248.5	841.2	877.1	0.00	0.00	0.00
7,079.6	9.10	73.54	7,009.7	252.1	853.2	889.7	0.00	0.00	0.00
7,100.0	8.70	73.54	7,029.9	253.0	856.3	892.9	2.00	-2.00	0.00
7,200.0	6.70	73.54	7,129.0	256.8	869.1	906.2	2.00	-2.00	0.00
7,300.0	4.70	73.54	7,228.5	259.6	878.6	916.2	2.00	-2.00	0.00
7,400.0	2.70	73.54	7,328.3	261.4	884.8	922.6	2.00	-2.00	0.00
7,500.0	0.70	73.54	7,428.2	262.2	887.6	925.6	2.00	-2.00	0.00
7,534.8	0.00	0.00	7,463.0	262.3	887.8	925.8	2.00	-2.00	0.00
7,600.0	0.00	0.00	7,528.2	262.3	887.8	925.8	0.00	0.00	0.00
7,626.8	0.00	0.00	7,555.0	262.3	887.8	925.8	0.00	0.00	0.00
<b>Niobrara</b>									
7,700.0	0.00	0.00	7,628.2	262.3	887.8	925.8	0.00	0.00	0.00
7,800.0	0.00	0.00	7,728.2	262.3	887.8	925.8	0.00	0.00	0.00
7,900.0	0.00	0.00	7,828.2	262.3	887.8	925.8	0.00	0.00	0.00
8,000.0	0.00	0.00	7,928.2	262.3	887.8	925.8	0.00	0.00	0.00
8,054.8	0.00	0.00	7,983.0	262.3	887.8	925.8	0.00	0.00	0.00
<b>Codell</b>									
8,100.0	0.00	0.00	8,028.2	262.3	887.8	925.8	0.00	0.00	0.00
8,200.0	0.00	0.00	8,128.2	262.3	887.8	925.8	0.00	0.00	0.00
8,300.0	0.00	0.00	8,228.2	262.3	887.8	925.8	0.00	0.00	0.00
8,400.0	0.00	0.00	8,328.2	262.3	887.8	925.8	0.00	0.00	0.00
8,484.8	0.00	0.00	8,413.0	262.3	887.8	925.8	0.00	0.00	0.00
<b>J Sand</b>									
8,500.0	0.00	0.00	8,428.2	262.3	887.8	925.8	0.00	0.00	0.00
8,600.0	0.00	0.00	8,528.2	262.3	887.8	925.8	0.00	0.00	0.00
8,634.8	0.00	0.00	8,563.0	262.3	887.8	925.8	0.00	0.00	0.00
<b>Production</b>									

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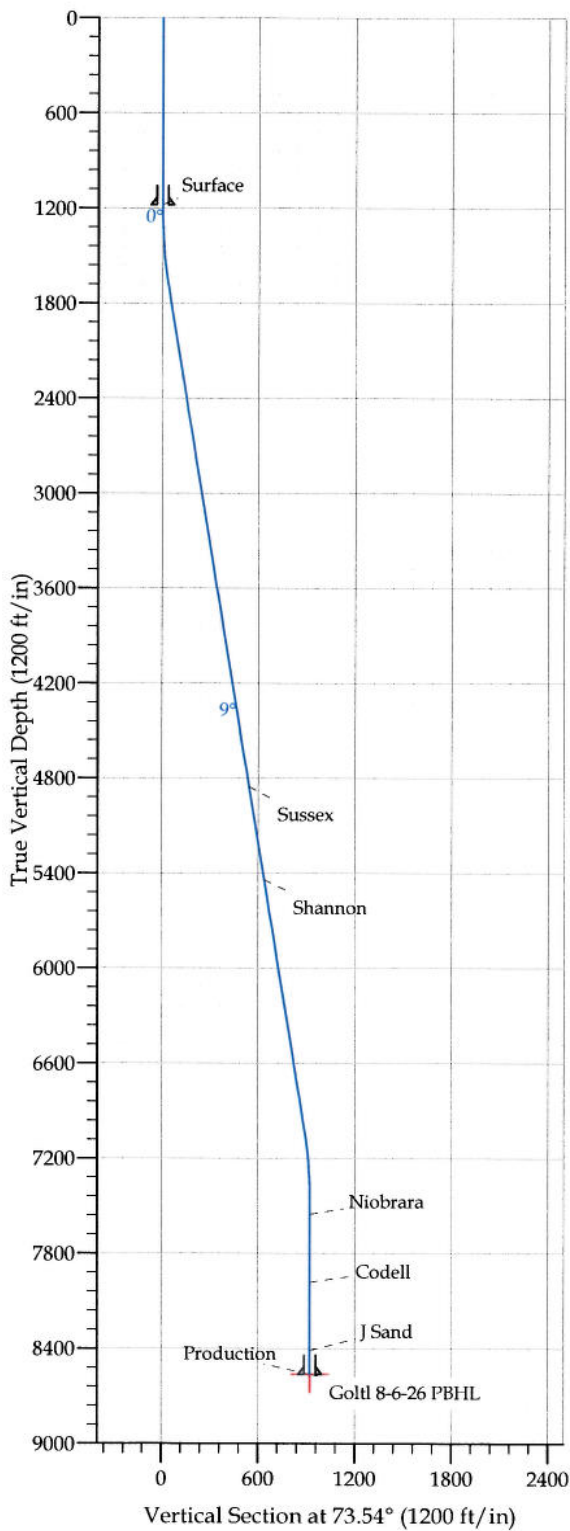
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<b>Company:</b>	DJ/Paradox/WTX	<b>TVD Reference:</b>	WELL @ 5183.0ft (Original Well Elev)
<b>Project:</b>	Wattenberg	<b>MD Reference:</b>	WELL @ 5183.0ft (Original Well Elev)
<b>Site:</b>	New Drills	<b>North Reference:</b>	True
<b>Well:</b>	Golti 8-6-26	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Golti 8-6-26 PBHL	0.00	0.00	8,563.0	262.3	887.8	1,249,981.79	3,150,798.83	40° 1' 5.988 N	104° 57' 41.688 W
- plan hits target									
- Circle (radius 100.0)									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(in)	(in)
1,180.0	1,180.0	Surface		8.625	12.250
8,634.8	8,563.0	Production		4.500	7.875

Formations						
Measured Depth	Vertical Depth	Name		Lithology	Dip	Dip Direction
(ft)	(ft)				(°)	(°)
4,895.4	4,853.0	Sussex			0.00	
5,492.9	5,443.0	Shannon			0.00	
7,626.8	7,555.0	Niobrara			0.00	
8,054.8	7,983.0	Codell			0.00	
8,484.8	8,413.0	J Sand			0.00	



#### REFERENCE INFORMATION

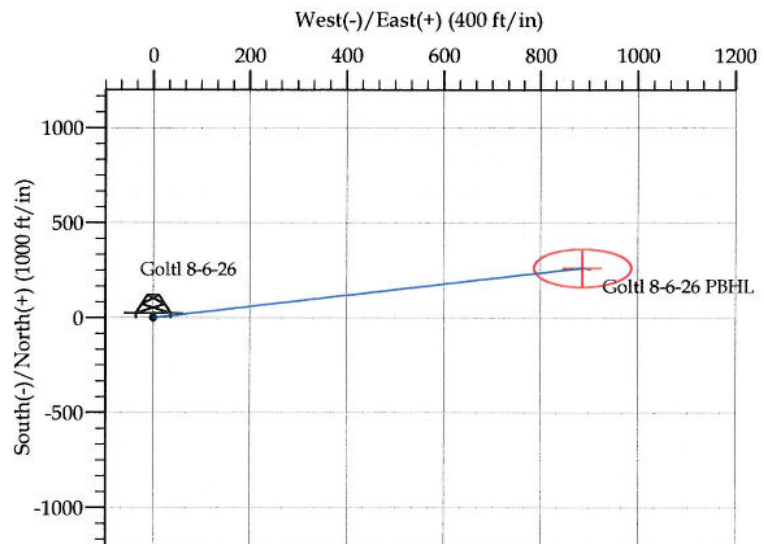
Co-ordinate (N/E) Reference: Well Goltl 8-6-26, True North  
 Vertical (TVD) Reference: WELL @ 5183.0ft (Original Well Elev)  
 Section (VS) Reference: Slot - (0.0N, 0.0E)  
 Measured Depth Reference: WELL @ 5183.0ft (Original Well Elev)  
 Calculation Method:

#### WELL DETAILS: Goltl 8-6-26

+N/-S	+E/-W	Northing	Ground Level: Easting	5170.0 Latitude	Longitude	Slot
0.0	0.0	1249714.14	3149912.58	40° 1' 3.396 N 104° 57' 53.100 W		

#### 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	1230.0	0.00	0.00	1230.0	0.0	0.0	0.00	0.00	0.0	
3	1685.2	9.10	73.54	1683.3	10.2	34.6	2.00	73.54	36.1	
4	7079.6	9.10	73.54	7009.7	252.1	853.2	0.00	0.00	889.7	
5	7534.8	0.00	0.00	7463.0	262.3	887.8	2.00	180.00	925.8	
6	8634.8	0.00	0.00	8563.0	262.3	887.8	0.00	0.00	925.8	Goltl 8-6-26 PBHL



#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4853.0	4895.4	Sussex
5443.0	5492.9	Shannon
7555.0	7626.8	Niobrara
7983.0	8054.8	Codell
8413.0	8484.8	J Sand

#### CASING DETAILS

TVD	MD	Name	Size
1180.0	1180.0	Surface	8.625
8563.0	8634.8	Production	4.500