

# EnCana Corporation

## Planning Report - Geographic

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Well Williams 2-8-18
<b>Company:</b>	DJ/Paradox/WTX	<b>TVD Reference:</b>	WELL @ 4994.0ft (Original Well Elev)
<b>Project:</b>	Wattenberg	<b>MD Reference:</b>	WELL @ 4994.0ft (Original Well Elev)
<b>Site:</b>	New Drills	<b>North Reference:</b>	True
<b>Well:</b>	Williams 2-8-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Williams 2-8-18		

<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:	1,278,589.08ft	Latitude:	40° 5' 49.848 N	
From:	Lat/Long	Easting:	3,130,247.44ft	Longitude:	105° 2' 3.912 W	
Position Uncertainty:		ft	Slot Radius:	in	Grid Convergence:	0.30 °

Well	Williams 2-8-18					
Well Position	+N-S	13,663.6 ft	Northing:	1,292,227.88 ft	Latitude:	40° 8' 4.884 N
	+E-W	-4,873.3 ft	Easting:	3,125,305.13 ft	Longitude:	105° 3' 6.624 W
Position Uncertainty		ft	Wellhead Elevation:	ft	Ground Level:	4,981.0 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	9.15	66.84	53,132

<b>Design</b>	Williams 2-8-18				
<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	170.11	

<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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,427.5	12.55	170.11	1,422.5	-67.4	11.8	2.00	2.00	0.00	170.11	
6,566.3	12.55	170.11	6,438.5	-1,167.5	203.5	0.00	0.00	0.00	0.00	
7,193.8	0.00	0.00	7,061.0	-1,234.9	215.3	2.00	-2.00	0.00	180.00	
8,243.8	0.00	0.00	8,111.0	-1,234.9	215.3	0.00	0.00	0.00	0.00	Williams 2-8-18

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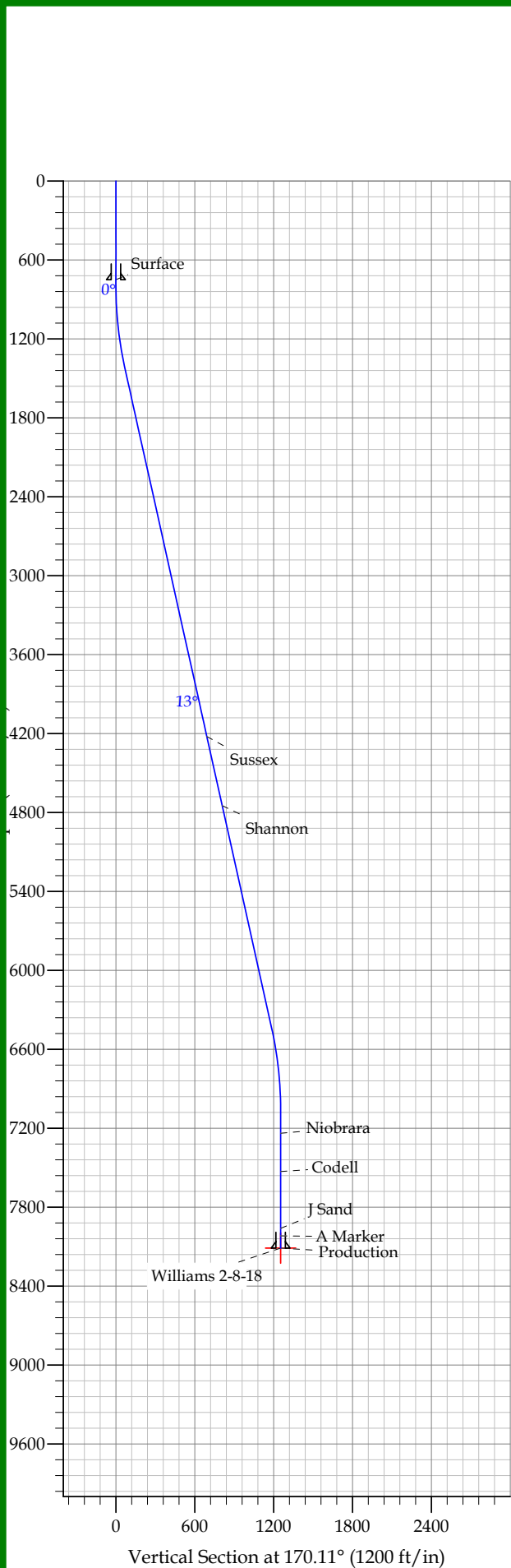
<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Well Williams 2-8-18
<b>Company:</b>	DJ/Paradox/WTX	<b>TVD Reference:</b>	WELL @ 4994.0ft (Original Well Elev)
<b>Project:</b>	Wattenberg	<b>MD Reference:</b>	WELL @ 4994.0ft (Original Well Elev)
<b>Site:</b>	New Drills	<b>North Reference:</b>	True
<b>Well:</b>	Williams 2-8-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Williams 2-8-18		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,292,227.88	3,125,305.13	40° 8' 4.884 N	105° 3' 6.624 W	
750.0	0.00	0.00	750.0	0.0	0.0	1,292,227.88	3,125,305.13	40° 8' 4.884 N	105° 3' 6.624 W	
Surface										
800.0	0.00	0.00	800.0	0.0	0.0	1,292,227.88	3,125,305.13	40° 8' 4.884 N	105° 3' 6.624 W	
1,427.5	12.55	170.11	1,422.5	-67.4	11.8	1,292,160.51	3,125,317.23	40° 8' 4.217 N	105° 3' 6.473 W	
4,295.5	12.55	170.11	4,222.0	-681.4	118.8	1,291,547.11	3,125,427.37	40° 7' 58.150 N	105° 3' 5.094 W	
Sussex										
4,834.4	12.55	170.11	4,748.0	-796.7	138.9	1,291,431.86	3,125,448.06	40° 7' 57.010 N	105° 3' 4.836 W	
Shannon										
6,566.3	12.55	170.11	6,438.5	-1,167.5	203.5	1,291,061.46	3,125,514.57	40° 7' 53.346 N	105° 3' 4.003 W	
7,193.8	0.00	0.00	7,061.0	-1,234.9	215.3	1,290,994.09	3,125,526.67	40° 7' 52.680 N	105° 3' 3.852 W	
7,370.8	0.00	0.00	7,238.0	-1,234.9	215.3	1,290,994.09	3,125,526.67	40° 7' 52.680 N	105° 3' 3.852 W	
Niobrara										
7,661.8	0.00	0.00	7,529.0	-1,234.9	215.3	1,290,994.09	3,125,526.67	40° 7' 52.680 N	105° 3' 3.852 W	
Codell										
8,093.8	0.00	0.00	7,961.0	-1,234.9	215.3	1,290,994.09	3,125,526.67	40° 7' 52.680 N	105° 3' 3.852 W	
J Sand										
8,150.8	0.00	0.00	8,018.0	-1,234.9	215.3	1,290,994.09	3,125,526.67	40° 7' 52.680 N	105° 3' 3.852 W	
A Marker										
8,243.8	0.00	0.00	8,111.0	-1,234.9	215.3	1,290,994.09	3,125,526.67	40° 7' 52.680 N	105° 3' 3.852 W	
Production - Williams 2-8-18										

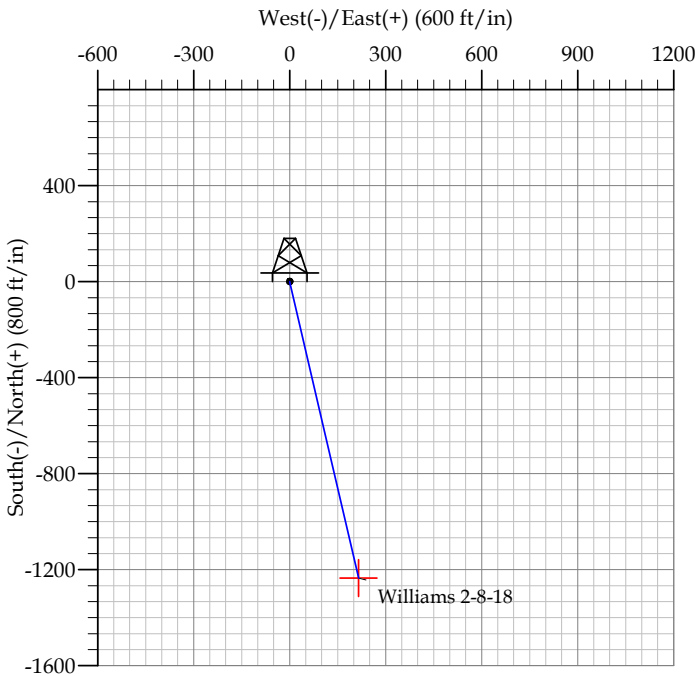
Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Williams 2-8-18	0.00	0.00	8,111.0	-1,234.9	215.3	1,290,994.09	3,125,526.67	40° 7' 52.680 N	105° 3' 3.852 W	
- plan hits target										
- Point										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
750.0	750.0	Surface	8.625	12.250	
8,243.8	8,111.0	Production	4.500	7.785	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,295.5	4,222.0	Sussex		0.00		
4,834.4	4,748.0	Shannon		0.00		
7,370.8	7,238.0	Niobrara		0.00		
7,661.8	7,529.0	Codell		0.00		
8,093.8	7,961.0	J Sand		0.00		
8,150.8	8,018.0	A Marker		0.00		



REFERENCE INFORMATION											
Co-ordinate (N/E) Reference: Well Williams 2-8-18, True North											
Vertical (TVD) Reference: WELL @ 4994.0ft (Original Well Elev)											
Section (VS) Reference: Slot - (0.0N, 0.0E)											
Measured Depth Reference: WELL @ 4994.0ft (Original Well Elev)											
Calculation Method:											
WELL DETAILS: Williams 2-8-18											
+N/-S		+E/-W		Northing		Ground Level: 4981.0 Easting		Latitude		Longitude Slot	
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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0		
3	1427.5	12.55	170.11	1422.5	-67.4	11.8	2.00	170.11	68.5		
4	6566.3	12.55	170.11	6438.5	-1167.5	203.5	0.00	0.00	1185.1		
5	7193.8	0.00	0.00	7061.0	-1234.9	215.3	2.00	180.00	1253.5		
6	8243.8	0.00	0.00	8111.0	-1234.9	215.3	0.00	0.00	1253.5	Williams 2-8-18	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4222.0	4295.5	Sussex
4748.0	4834.4	Shannon
7238.0	7370.8	Niobrara
7529.0	7661.8	Codell
7961.0	8093.8	J Sand
8018.0	8150.8	A Marker

CASING DETAILS			
TVD	MD	Name	Size
750.0	750.0	Surface	8.625
8111.0	8243.8	Production	4.500