

EnCana Corporation

Planning Report - Geographic

Database:	EDM	Local Co-ordinate Reference:	Well Williams 4-8-18
Company:	DJ/Paradox/WTX	TVD Reference:	WELL @ 4995.0ft (Original Well Elev)
Project:	Wattenberg	MD Reference:	WELL @ 4995.0ft (Original Well Elev)
Site:	New Drills	North Reference:	True
Well:	Williams 4-8-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Williams 4-8-18		

Project Wattenberg,			
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

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

Well Williams 4-8-18			
Well Position	+N/-S	13,652.7 ft	Northing:
	+E/-W	-4,873.3 ft	1,292,216.95 ft
			Latitude:
			40° 8' 4.776 N
			Longitude:
			105° 3' 6.624 W
Position Uncertainty		ft	Wellhead Elevation:
			ft
			Ground Level:
			4,982.0 ft

Wellbore Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.15	66.84	53,132

Design Williams 4-8-18				
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	127.15

Plan Sections										
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	
1,823.8	20.48	127.15	1,802.2	-109.3	144.3	2.00	2.00	0.00	127.15	
6,375.1	20.48	127.15	6,065.8	-1,070.9	1,413.2	0.00	0.00	0.00	0.00	
7,398.9	0.00	0.00	7,068.0	-1,180.2	1,557.5	2.00	-2.00	0.00	180.00	
8,448.9	0.00	0.00	8,118.0	-1,180.2	1,557.5	0.00	0.00	0.00	0.00	Williams 4-8-18

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Project:	Wattenberg	MD Reference:	WELL @ 4995.0ft (Original Well Elev)
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Well:	Williams 4-8-18	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Williams 4-8-18		

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	1,292,216.95	3,125,305.19	40° 8' 4.776 N	105° 3' 6.624 W	
750.0	0.00	0.00	750.0	0.0	0.0	1,292,216.95	3,125,305.19	40° 8' 4.776 N	105° 3' 6.624 W	
Surface										
800.0	0.00	0.00	800.0	0.0	0.0	1,292,216.95	3,125,305.19	40° 8' 4.776 N	105° 3' 6.624 W	
1,823.8	20.48	127.15	1,802.2	-109.3	144.3	1,292,108.36	3,125,450.00	40° 8' 3.696 N	105° 3' 4.767 W	
4,426.1	20.48	127.15	4,240.0	-659.1	869.8	1,291,562.24	3,126,178.30	40° 7' 58.262 N	105° 2' 55.425 W	
Sussex										
4,977.9	20.48	127.15	4,757.0	-775.7	1,023.7	1,291,446.42	3,126,332.75	40° 7' 57.110 N	105° 2' 53.444 W	
Shannon										
6,375.1	20.48	127.15	6,065.8	-1,070.9	1,413.2	1,291,153.22	3,126,723.77	40° 7' 54.192 N	105° 2' 48.429 W	
7,398.9	0.00	0.00	7,068.0	-1,180.2	1,557.5	1,291,044.63	3,126,868.58	40° 7' 53.112 N	105° 2' 46.572 W	
7,579.9	0.00	0.00	7,249.0	-1,180.2	1,557.5	1,291,044.63	3,126,868.58	40° 7' 53.112 N	105° 2' 46.572 W	
Niobrara										
7,868.9	0.00	0.00	7,538.0	-1,180.2	1,557.5	1,291,044.63	3,126,868.58	40° 7' 53.112 N	105° 2' 46.572 W	
Codell										
8,298.9	0.00	0.00	7,968.0	-1,180.2	1,557.5	1,291,044.63	3,126,868.58	40° 7' 53.112 N	105° 2' 46.572 W	
J Sand										
8,356.9	0.00	0.00	8,026.0	-1,180.2	1,557.5	1,291,044.63	3,126,868.58	40° 7' 53.112 N	105° 2' 46.572 W	
A Marker										
8,448.9	0.00	0.00	8,118.0	-1,180.2	1,557.5	1,291,044.63	3,126,868.58	40° 7' 53.112 N	105° 2' 46.572 W	
Production - Williams 4-8-18										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
Williams 4-8-18 - hit/miss target - Shape - Point	0.00	0.00	8,118.0	-1,180.2	1,557.5	1,291,044.63	3,126,868.58	40° 7' 53.112 N	105° 2' 46.572 W	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
750.0	750.0	Surface	8.625	12.250		
8,448.9	8,118.0	Production	4.500	7.785		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,426.1	4,240.0	Sussex		0.00		
4,977.9	4,757.0	Shannon		0.00		
7,579.9	7,249.0	Niobrara		0.00		
7,868.9	7,538.0	Codell		0.00		
8,298.9	7,968.0	J Sand		0.00		
8,356.9	8,026.0	A Marker		0.00		

REFERENCE INFORMATION

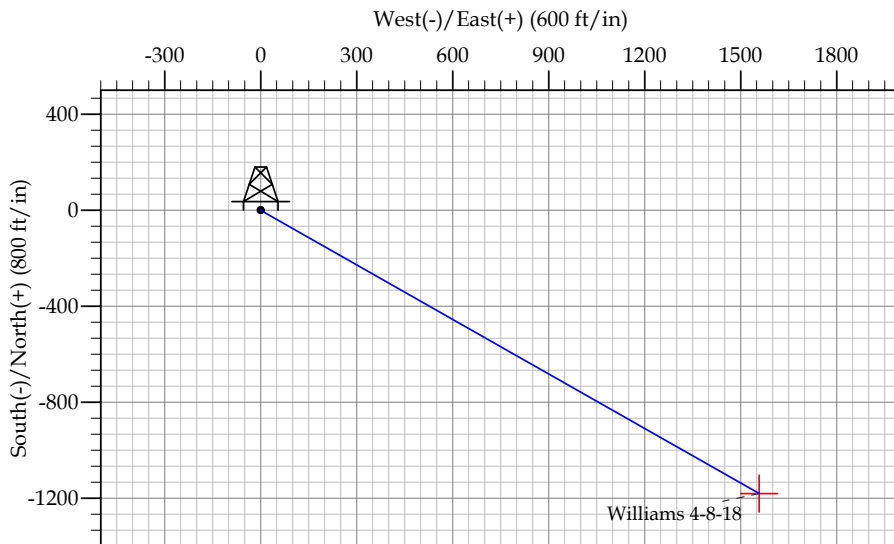
Co-ordinate (N/E) Reference: Well Williams 4-8-18, True North
 Vertical (TVD) Reference: WELL @ 4995.0ft (Original Well Elev)
 Section (VS) Reference: Slot - (0.0N, 0.0E)
 Measured Depth Reference: WELL @ 4995.0ft (Original Well Elev)
 Calculation Method:

WELL DETAILS: Williams 4-8-18

+N/-S	+E/-W	Northing	Ground Level: Easting	4982.0	Latitude	Longitude	Slot
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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	1823.8	20.48	127.15	1802.2	-109.3	144.3	2.00	127.15	181.0	
4	6375.1	20.48	127.15	6065.8	-1070.9	1413.2	0.00	0.00	1773.1	
5	7398.9	0.00	0.00	7068.0	-1180.2	1557.5	2.00	180.00	1954.1	
6	8448.9	0.00	0.00	8118.0	-1180.2	1557.5	0.00	0.00	1954.1	Williams 4-8-18



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4240.0	4426.1	Sussex
4757.0	4977.9	Shannon
7249.0	7579.9	Niobrara
7538.0	7868.9	Codell
7968.0	8298.9	J Sand
8026.0	8356.9	A Marker

CASING DETAILS

TVD	MD	Name	Size
750.0	750.0	Surface	8.625
8118.0	8448.9	Production	4.500

