

EnCana Corporation

Planning Report - Geographic

Database:	EDM	Local Co-ordinate Reference:	Well Minch 4-4-4
Company:	DJ/Paradox/WTX	TVD Reference:	WELL @ 5092.0ft (Original Well Elev)
Project:	Wattenberg	MD Reference:	WELL @ 5092.0ft (Original Well Elev)
Site:	New Drills	North Reference:	True
Well:	Minch 4-4-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Minch 4-4-4		

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	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	Minch 4-4-4					
Well Position	+N-S	56,390.4 ft	Northing:	1,335,005.40 ft	Latitude:	40° 15' 7.128 N
	+E-W	4,923.7 ft	Easting:	3,134,863.78 ft	Longitude:	105° 1' 0.552 W
Position Uncertainty		ft	Wellhead Elevation:	ft	Ground Level:	5,079.0ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.14	66.95	53,197

Design	Minch 4-4-4				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	68.01	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(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	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,065.7	26.31	68.01	2,019.9	111.1	275.3	2.00	2.00	0.00	68.01	
6,104.3	26.31	68.01	5,640.1	781.5	1,935.3	0.00	0.00	0.00	0.00	
7,420.0	0.00	0.00	6,910.0	892.6	2,210.5	2.00	-2.00	0.00	180.00	
8,420.0	0.00	0.00	7,910.0	892.6	2,210.5	0.00	0.00	0.00	0.00	Minch 4-4-4

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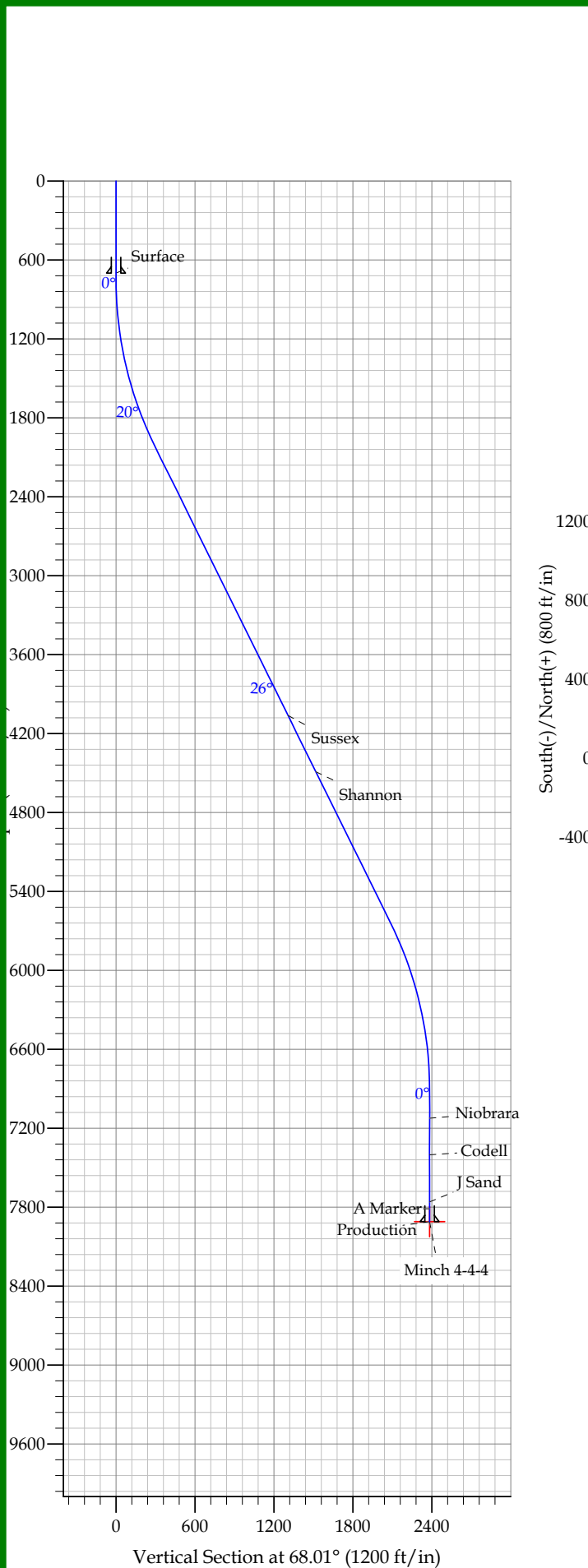
Database:	EDM	Local Co-ordinate Reference:	Well Minch 4-4-4
Company:	DJ/Paradox/WTX	TVD Reference:	WELL @ 5092.0ft (Original Well Elev)
Project:	Wattenberg	MD Reference:	WELL @ 5092.0ft (Original Well Elev)
Site:	New Drills	North Reference:	True
Well:	Minch 4-4-4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Minch 4-4-4		

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	1,335,005.40	3,134,863.78	40° 15' 7.128 N	105° 1' 0.552 W	
700.0	0.00	0.00	700.0	0.0	0.0	1,335,005.40	3,134,863.78	40° 15' 7.128 N	105° 1' 0.552 W	
Surface										
750.0	0.00	0.00	750.0	0.0	0.0	1,335,005.40	3,134,863.78	40° 15' 7.128 N	105° 1' 0.552 W	
2,065.7	26.31	68.01	2,019.9	111.1	275.3	1,335,118.05	3,135,138.43	40° 15' 8.226 N	105° 0' 57.002 W	
4,343.8	26.31	68.01	4,062.0	489.3	1,211.7	1,335,501.26	3,136,072.75	40° 15' 11.963 N	105° 0' 44.924 W	
Sussex										
4,821.3	26.31	68.01	4,490.0	568.5	1,407.9	1,335,581.58	3,136,268.58	40° 15' 12.746 N	105° 0' 42.393 W	
Shannon										
6,104.3	26.31	68.01	5,640.1	781.5	1,935.3	1,335,797.40	3,136,794.78	40° 15' 14.850 N	105° 0' 35.590 W	
7,420.0	0.00	0.00	6,910.0	892.6	2,210.5	1,335,910.04	3,137,069.43	40° 15' 15.948 N	105° 0' 32.040 W	
7,634.0	0.00	0.00	7,124.0	892.6	2,210.5	1,335,910.04	3,137,069.43	40° 15' 15.948 N	105° 0' 32.040 W	
Niobrara										
7,912.0	0.00	0.00	7,402.0	892.6	2,210.5	1,335,910.04	3,137,069.43	40° 15' 15.948 N	105° 0' 32.040 W	
Codell										
8,270.0	0.00	0.00	7,760.0	892.6	2,210.5	1,335,910.04	3,137,069.43	40° 15' 15.948 N	105° 0' 32.040 W	
J Sand										
8,323.0	0.00	0.00	7,813.0	892.6	2,210.5	1,335,910.04	3,137,069.43	40° 15' 15.948 N	105° 0' 32.040 W	
A Marker										
8,420.0	0.00	0.00	7,910.0	892.6	2,210.5	1,335,910.04	3,137,069.43	40° 15' 15.948 N	105° 0' 32.040 W	
Production - Minch 4-4-4										

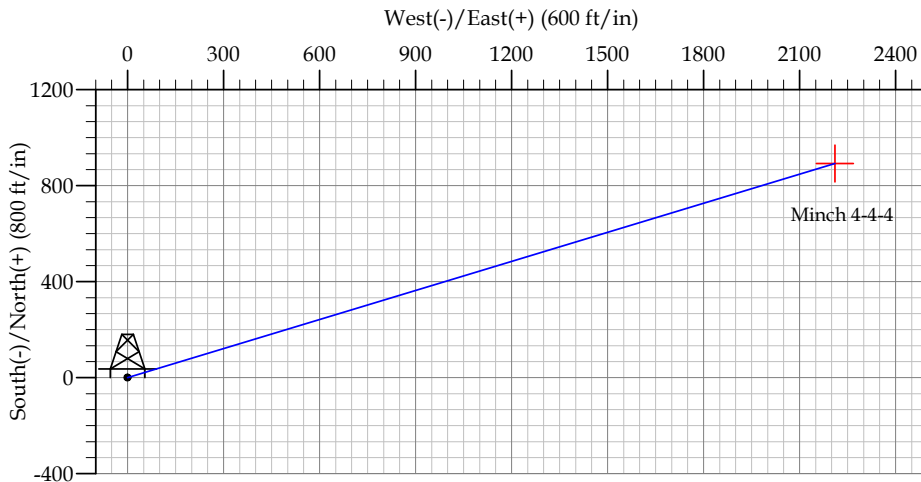
Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Minch 4-4-4	0.00	0.00	7,910.0	892.6	2,210.5	1,335,910.04	3,137,069.43	40° 15' 15.948 N	105° 0' 32.040 W	
- plan hits target										
- Point										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
700.0	700.0	Surface	8.625	12.250	
8,420.0	7,910.0	Production	4.500	7.785	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,343.8	4,062.0	Sussex		0.00		
4,821.3	4,490.0	Shannon		0.00		
7,634.0	7,124.0	Niobrara		0.00		
7,912.0	7,402.0	Codell		0.00		
8,270.0	7,760.0	J Sand		0.00		
8,323.0	7,813.0	A Marker		0.00		



REFERENCE INFORMATION											
Co-ordinate (N/E) Reference: Well Minch 4-4-4, True North											
Vertical (TVD) Reference: WELL @ 5092.0ft (Original Well Elev)											
Section (VS) Reference: Slot - (0.0N, 0.0E)											
Measured Depth Reference: WELL @ 5092.0ft (Original Well Elev)											
Calculation Method:											
WELL DETAILS: Minch 4-4-4											
+N/-S		+E/-W		Northing		Ground Level: 5079.0		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	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0		
3	2065.7	26.31	68.01	2019.9	111.1	275.3	2.00	68.01	296.8		
4	6104.3	26.31	68.01	5640.1	781.5	1935.3	0.00	0.00	2087.1		
5	7420.0	0.00	0.00	6910.0	892.6	2210.5	2.00	180.00	2384.0		
6	8420.0	0.00	0.00	7910.0	892.6	2210.5	0.00	0.00	2384.0	Minch 4-4-4	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4062.0	4343.8	Sussex
4490.0	4821.3	Shannon
7124.0	7634.0	Niobrara
7402.0	7912.0	Codell
7760.0	8270.0	J Sand
7813.0	8323.0	A Marker

CASING DETAILS			
TVD	MD	Name	Size
700.0	700.0	Surface	8.625
7910.0	8420.0	Production	4.500